Commercial Air Conditioning

SERVICE MANUAL

MULTI Split series

Models

Indoor: YHKMXH009BARR-FX
YHKMXH012BARR-FX
YHKMXH018BARR-FX
YHKMXH024BARR-FX
YHFMXH012BARR-FX
YHFMXH018BARR-FX
YHFMXH024BARR-FX
YHDMXH009BARR-FX
YHDMXH012BARR-FX
YHDMXH018BARR-FX
YHDMXH024BARR-FX

Outdoor: YJU3YH019BARRA-X
YJU4YH025BARRA-X
YJU4YH030BARRA-X
YJU5YH034BARRA-X

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1.Description of products & features

1.1. Brief Introduction for T1,T2,T3 working condition

Type of Air Conditioner	Climate type		
	T1	T2	T3
Cooling Only	18 ℃~43℃	10℃~35℃	21℃~52℃
Heat pump	-7℃~43℃	-7℃~35℃	-7℃~52℃
Electricity Heating	~43℃	~35℃	~52℃

1.2 Operating Range of Air Conditioners

Working temperature range					
			Rated	Maximum	Minimum
Cooling	Indoor	DB℃	27	32	18
		WB℃	19	23	14
	outdoor	DB℃	35	43	-10
		WB℃	24	26	6
Heating	Indoor	DB℃	20	27	15
		WB℃	14.5	--	--
	outdoor	DB℃	7	24	-15
		WB℃	6	18	--

1.3 Product features

DC inverter technology, high energy efficiency, higher EER A+, energy saving for the user

The outdoor unit adopts DC inverter compressor and motor, so save power energy is just to save money for the user. And the outdoor can match with multiple indoor units, up to 5 sets. Even when you have already installed the air conditioner, if you want to add or reduce one unit, go ahead freely as long as your operation complies with our design. Greatly convenient for designer and installer.

Precise control, more comfortable and more reliable

The outdoor is equipped with electronic expansion valve, which will control refrigerant flow more precisely. As a result, the user will feel more comfortable and the unit is more reliable.

Also, the outdoor is with oil segregator, which will keep the compressor working normally and make oil return more smoothly.

Adopt the much friendlier refrigerant R410a

The air conditioner system adopts the greatly friendly refrigerant R410a, which is protective for the ozone layer and is good to avoid the earth getting warmer. Benefit for the environment.

High voltage communication, convenient wiring work

Connect indoor and outdoor directly, and there is no communication wire between indoors. Thus the wiring work is more convenient. No need to set indoor address.

Multiple control types

The indoor unit can be controlled by multiple types: infrared controller, wired controller, central controller. More choice, more conveniently.

10℃ constant temperature control

When leave home temporarily, press 10℃ button of remote controller, the indoor temperature won t decrease rapidly while be controlled at 10℃. When come back home, press it again, the unit will be back to normal status and setting temperature.

Self-diagnostic function

In the course of operation, if the failure occurs, the failure code will display on the wired controller or

on the operation panel. Then according to the failure code chart, you can eliminate the failure soon.

- **Central control function, if connected with a central controller**

That is convenient for building management.

- **Weekly timing function, if connected with a weekly timer**
- **Universal power supply for 50Hz and 60Hz**

The multi upgrade series adopts universal power supply for 50Hz and 60Hz, which is convenient for design. Much wider application.

1.4 Product lineup

➢**Outdoor unit 220V/1/ *(50/60Hz)***

Connection diagram	Picture	Max.indoor quantity	Cooling capacity(Kbtu)			
			19	25	30	34
		3	●			
		4		●	●	
		5				●

2. Specifications

Item \ Model				YJU3YH019BAR-A-X	
Function				**Cooling**	**Heating**
Rating capacity			W	5400	6500
Power input (indoor + outdoor)			W	1410	1520
Current input (indoor + outdoor)			A	6.13	6.6
EER / COP			W/W	3.84	4.28
Minimum capacity			W	1500	1800
Minimum power input			W	500	500
Maximum capacity			W	7000	8100
Maximum power input (indoor + outdoor)			W	2600	2600
Power source				1PH, 220-230V~, 50/60Hz	
Max.Running current (indoor + outdoor)			A / A	11.3	11.3
Power facor(under rating power input)				99%	99%
Fuse size (recommended size)			A	16	
Indoor units number				1~3	
Outdoor unit	Compressor	Model / Manufacture		SNB130FGYMC-L1 / MGC	
		Oil charge and type		500CC, FV 50S	
		Type		Twin Rotary (DC inverter)	
		Winding resistance(at 20℃)	Ω	0.58	
	Fan system	Fan type × Number		Axial × 1	
		Motor speed	r/min	Max. 860	
		Fan motor model		ARW4403AS	
		Motor type		DC	
		Motor output/input power	W	55/69	
		Air-flows (H/M/L)	m³/h	about 2000	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.94	
		Number of rows		2	
		Face area	m²	about 0.52	
	Dimension (WxDxH)	External	mm	886/289/688	
		Package	mm	990/405/760	
	Refrigerant control method			PMVs	
	Defrosting method			Automatic by reversible cycle	
	Crankcase heater power		W	35	
	Noise level	sound pressure（H/M/L)	dB(A)	52/-/-	
		sound power （H/M/L)	dB(A)	63/-/-	
	Weight	Net / Shipping	kg / kg	51/ 53	
Piping	Refrigerant	Type / Charge	kg	R410A /1.9	
		No need to recharge total liquid piping length	m	30	
		Recharge	g/m	20	
	Pipe size	Liquid	mm	3* Φ6.35	
		Gas	mm	3* Φ9.52	
	Connecting method			Flared	
	Between IU & OU	Max.Drop between IU & OU	m	15	
		Max.Drop between indoor units	m	7.5	
		Max.Piping length between IU & OU	m	25	
		Max.Total length	m	50	

1. The above performance data are from the combination of 3U19FS1ERA+3*AS09CS1ERA

2. Large drop and long piping installation will obviously reduce the total capacity.

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				YJU4YH025BAR-A-X	
Function				**Cooling**	**Heating**
Rating capacity			W	7600	8600
Power input (indoor + outdoor)			W	2100	2060
Current input (indoor + outdoor)			A	9.1	9.0
EER / COP			W/W	3.62	4.18
Minimum capacity			W	1500	1800
Minimum power input			W	550	550
Maximum capacity			W	9000	9500
Maximum power input (indoor + outdoor)			W	3500	3500
Power source				1PH, 220-230V~, 50/60Hz	
Max.Running current (indoor + outdoor)			A / A	15.2	15.2
Power facor(under rating power input)				99%	99%
Fuse size (recommended size)			A	25	
Indoor units number				2~4	
Outdoor unit	Compressor	Model / Manufacture		TNB220FLHMC-L / MGC	
		Oil charge and type		870CC / FV50S	
		Type		Twin Rotary (DC inverter)	
		Winding resistance(at 20℃)	Ω	0.88	
	Fan system	Fan type × Number		Axial × 1	
		Motor speed	r/min	Max. 860	
		Fan motor model		EHDS80A100AS	
		Motor type		DC	
		Motor output/input power	W	100/125	
		Air-flows (H/M/L)	m³/h	about 4000	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.94	
		Number of rows		2	
		Face area	m²	about 0.75	
	Dimension (WxDxH)	External	mm	948/340/840	
		Package	mm	1040/430/1000	
	Refrigerant control method			PMVs	
	Defrosting method			Automatic by reversible cycle	
	Crankcase heater power		W	35	
	Noise level	sound pressure（H/M/L)	dB(A)	56	
		sound power （H/M/L)	dB(A)	67	
	Weight	Net / Shipping	kg / kg	74/85	
Piping	Refrigerant	Type / Charge	kg	R410A / 3.1	
		No need to recharge total liquid piping length	m	40	
		Recharge	g/m	20	
	Pipe size	Liquid	mm	4* Φ6.35	
		Gas	mm	3* Φ9.52(A,B,C)+1*Φ12.7(D)	
	Connecting method			Flared	
	Between IU & OU	Max.Drop between IU & OU	m	15	
		Max.Drop between indoor units	m	7.5	
		Max.Piping length between IU & OU	m	25	
		Max.Total length	m	70	

1. The above performance data are from the combination of 4U25HS1ERA+4*AS09CS1ERA.
2. Large drop and long piping installation will obviously reduce the total capacity.

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				YJU4YH030BAR-A-X	
Function				**Cooling**	**Heating**
Rating capacity			W	8100	9800
Power input (indoor + outdoor)			W	2220	2430
Current input (indoor + outdoor)			A	9.7	10.6
EER / COP			W/W	3.65	4.03
Minimum capacity			W	1500	1800
Minimum power input			W	550	550
Maximum capacity			W	9800	10500
Maximum power input (indoor + outdoor)			W	3800	3800
Power source				1PH, 220-230V~, 50/60Hz	
Max.Running current (indoor + outdoor)			A / A	16.5	16.5
Power facor(under rating power input)				99%	99%
Fuse size (recommended size)			A	25	
Indoor units number				2~4	
Outdoor unit	Compressor	Model / Manufacture		TNB220FLHMC-L / MGC	
		Oil charge and type		870CC / FV50S	
		Type		Twin Rotary (DC inverter)	
		Winding resistance(at 20℃)	Ω	0.88	
	Fan system	Fan type × Number		Axial × 1	
		Motor speed	r/min	Max. 860	
		Fan motor model		EHDS80A100AS	
		Motor type		DC	
		Motor output/input power	W	100/125	
		Air-flows (H/M/L)	m³/h	about 4000	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0	
		Number of rows		3	
		Face area	m²	about 0.75	
	Dimension (WxDxH)	External	mm	948/340/840	
		Package	mm	1040/430/1000	
	Refrigerant control method			PMVs	
	Defrosting method			Automatic by reversible cycle	
	Crankcase heater power		W	35	
	Noise level	sound pressure（H/M/L)	dB(A)	58	
		sound power （H/M/L)	dB(A)	69	
	Weight	Net / Shipping	kg / kg	76/87	
Piping	Refrigerant	Type / Charge	kg	R410A / 3.0	
		No need to recharge total liquid piping length	m	40	
		Recharge	g/m	20	
	Pipe size	Liquid	mm	4* Φ6.35	
		Gas	mm	3* Φ9.52(A,B,C)+1*Φ12.7(D)	
	Connecting method			Flared	
	Between IU & OU	Max.Drop between IU & OU	m	15	
		Max.Drop between indoor units	m	7.5	
		Max.Piping length between IU & OU	m	25	
		Max.Total length	m	70	

1. The above performance data are from the combination of 4U30HS1ERA+4*AS09CS1ERA.
2. Large drop and long piping installation will obviously reduce the total capacity.

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item \ Model				YJU5YH034BAR-A-X	
Function				**Cooling**	**Heating**
Rating capacity			W	10000	10700
Power input (indoor + outdoor)			W	2940	2850
Current input (indoor + outdoor)			A	12.8	12.4
EER / COP			W/W	3.4	3.75
Minimum capacity			W	1500	1800
Minimum power input			W	550	550
Maximum capacity			W	11000	11500
Maximum power input (indoor + outdoor)			W	4000	4000
Power source				1PH, 220-230V~, 50/60Hz	
Max.Running current (indoor + outdoor)			A / A	17.4	17.4
Power facor(under rating power input)				99%	99%
Fuse size (recommended size)			A	30	
Indoor units number				2~5	
Outdoor unit	Compressor	Model / Manufacture		TNB220FLHMC-L / MGC	
		Oil charge and type		870CC / FV50S	
		Type		Twin Rotary (DC inverter)	
		Winding resistance(at 20℃)	Ω	0.88	
	Fan system	Fan type × Number		Axial × 1	
		Motor speed	r/min	Max. 900	
		Fan motor model		EHDS80A100AS	
		Motor type		DC	
		Motor output/input power	W	100/125	
		Air-flows (H/M/L)	m³/h	about 4000	
	Heat exchanger	Type / Diameter	mm	TP2M / 7.0	
		Number of rows		3	
		Face area	m²	about 0.75	
	Dimension (WxDxH)	External	mm	948/340/840	
		Package	mm	1040/430/1000	
	Refrigerant control method			PMVs	
	Defrosting method			Automatic by reversible cycle	
	Crankcase heater power		W	35	
	Noise level	sound pressure（H/M/L)	dB(A)	58/-/-	
		sound power （H/M/L)	dB(A)	69/-/-	
	Weight	Net / Shipping	kg / kg	77/88	
Piping	Refrigerant	Type / Charge	kg	R410A / 3.2	
		No need to recharge total liquid piping length	m	40	
		Recharge	g/m	20	
	Pipe size	Liquid	mm	5* Φ6.35	
		Gas	mm	4* Φ9.52(A,B,C,D)+1*Φ12.7(E)	
	Connecting method			Flared	
	Between IU & OU	Max.Drop between IU & OU	m	15	
		Max.Drop between indoor units	m	7.5	
		Max.Piping length between IU & OU	m	25	
		Max.Total length	m	80	

1. The above performance data are from the combination of **5U34HS1ERA+3*AS09CS1ERA+1*AS18CS1ERA.**
2. Large drop and long piping installation will obviously reduce the total capacity.

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHKMXH009BARR-FX	
Function					cooling	heating
Capacity				kW	2.6	2.9
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.5	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	690/620/560	
		Fan motor output power		kW	0.03	
		Air-flow(H-M-L)		m³/h	620/520/450	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.272	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	570×570×260	
		Package	（L×W×H）	mm×mm×mm	718×680×380	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 26/32	
	Control type (Remote /wired)				Remote or Wired	
	Fresh air hole dimension			mm	95	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	40/36/32	
	Noise level ---sound power (H-M-L)			dB(A)	51/47/43	
	Weight (Net / Shipping)			kg / kg	17/20	
Panel	Panel model (color)				**PB-700IB（WHITE）**	
	Dimension	External	（L×W×H）	mm×mm×mm	700×700×60	
		Package	（L×W×H）	mm×mm×mm	740×750×115	
	Weight (Net / Shipping)			kg / kg	2.8 / 4.8	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35(1/4)	
		Gas		mm	φ9.52(3/8)	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHDMXH009BARR-FX	
Function					cooling	heating
Capacity				kW	2.6	2.9
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.6	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	1000/900/800±50	
		Fan motor output power		kW	0.05	
		Air-flow(H-M-L)		m³/h	550/450/400	
	Static pressure			Pa	25	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.11	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	610×483×220	
		Package	（L×W×H）	mm×mm×mm	695×536×265	
	Drainage pipe (material , I.D./O.D.)			mm	20/18	
	Control type (Remote / Wired)				wired	
	Fresh air hole dimension			mm	NONE	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	37/34/31	
	Noise level ---sound power (H-M-L)			dB(A)	48/45/42	
	Weight (Net / Shipping)			kg / kg	14/16	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35(1/4)	
		Gas		mm	φ9.52(3/8)	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHKMXH012BARR-FX	
Function					cooling	heating
Capacity				kW	3.5(0.9--4.5)	3.7(1.0--4.8)
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.5	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	690/620/560	
		Fan motor output power		kW	0.03	
		Air-flow(H-M-L)		m³/h	620/520/450	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.272	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	570×570×260	
		Package	（L×W×H）	mm×mm×mm	718×680×380	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 26/32	
	Control type (Remote /wired)				Remote,.YR-HD	
	Fresh air hole dimension			mm	56	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	40/36/32	
	Noise level ---sound power (H-M-L)			dB(A)	51/47/43	
	Weight (Net / Shipping)			kg / kg	18.5/23	
Panel	Panel model (color)				**PB-700IB（WHITE）**	
	Dimension	External	（L×W×H）	mm×mm×mm	700×700×60	
		Package	（L×W×H）	mm×mm×mm	740×750×115	
	Weight (Net / Shipping)			kg / kg	3.5/4.5	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35(1/4)	
		Gas		mm	φ9.52(3/8)	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHFMXH012BARR-FX	
Function					cooling	heating
Capacity				kW	3.5(0.9--4.5)	3.9(1.0--4.8)
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.6	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX2	
		Speed(H-M-L)		r/min	1100/1025/825	
		Fan motor output power		kW	0.09	
		Air-flow(H-M-L)		m³/h	650/550/450	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.20	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	990*655*199	
		Package	（L×W×H）	mm×mm×mm	1150*750*300	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 18/20	
	Control type (Remote /wired)				Remote,.YR-HD	
	Fresh air hole dimension			mm	NONE	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	41/37/33	
	Noise level ---sound power (H-M-L)			dB(A)	52/48/44	
	Weight (Net / Shipping)			kg / kg	26.3/32.3	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35(1/4)	
		Gas		mm	φ9.52(3/8)	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHDMXH012BARR-FX	
Function					cooling	heating
Capacity				kW	3.5(0.9--4.5)	4.0(1.0--4.8)
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.6	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	1000/900/800±50	
		Fan motor output powe		kW	0.05	
		Air-flow(H-M-L)		m³/h	550/450/400	
	Static pressure			Pa	25	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.11	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	610×483×220	
		Package	（L×W×H）	mm×mm×mm	695×536×265	
	Drainage pipe (material , I.D./O.D.)			mm	20/24	
	Control type (Remote / Wired)				wired,YR-E14	
	Fresh air hole dimension			mm	NONE	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	37/34/31	
	Noise level ---sound power (H-M-L)			dB(A)	48/45/42	
	Weight (Net / Shipping)			kg / kg	14/16	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35(1/4)	
		Gas		mm	φ9.52(3/8)	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHKMXH018BARR-FX	
Function					cooling	heating
Capacity				kW	5.0(1.8--5.8)	5.2(2.0--6.5)
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.8	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	795/690/550±50	
		Fan motor output power		kW	0.065	
		Air-flow(H-M-L)		m³/h	680/620/500	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.272	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	570/570/260	
		Package	（L×W×H）	mm×mm×mm	718*680*380	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 26/32	
	Control type (Remote /wired)				Remote,.YR-HD	
	Fresh air hole dimension			mm	56	
	Noise level ---sound presure (H-M-L)			dB(A)	42/37/35	
	Noise level ---sound power (H-M-L)			dB(A)	53/48/46	
	Weight (Net / Shipping)			kg / kg	18.5/23	
Panel	Panel model (color)				**PB-700IB（WHITE）**	
	Dimension	External	（L×W×H）	mm×mm×mm	700*700*60	
		Package	（L×W×H）	mm×mm×mm	740*750*115	
	Weight (Net / Shipping)			kg / kg	3.5/4.5	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	6.35	
		Gas		mm	12.7	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHFMXH018BARR-FX	
Function					cooling	heating
Capacity				kW	5.0(1.8--5.8)	5.5(2.0--6.5)
Sensible heat ratio					0.71	/
Dehumidifying capacity				10 - ³×m³/h	1.8	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX2	
		Speed(H-M-L)		r/min	1220/1190/1050	
		Fan motor output power		kW	0.075	
		Air-flow(H-M-L)		m³/h	800/720/650	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.45	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	990*655*199	
		Package	（L×W×H）	mm×mm×mm	1150*750*300	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 18/20	
	Control type (Remote /wired)				Remote,.YR-HD	
	Fresh air hole dimension			mm	NONE	
	Electricity Heater			kW	NONE	
	Noise level ---sound presure (H-M-L)			dB(A)	44/41/36	
	Noise level ---sound power (H-M-L)			dB(A)	55/52/47	
	Weight (Net / Shipping)			kg / kg	28.3/34.3	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35	
		Gas		mm	φ9.52	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHDMXH018BARR-FX	
Function					cooling	heating
Capacity				kW	5.0(1.8--6.0)	5.5(2.0--6.2)
Sensible heat ratio					0.73	/
Dehumidifying capacity				10 - ³×m³/h	2.1	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX2	
		Speed(H-M-L)		r/min	730±30/540±30/400±30	
		Fan motor output pov		kW	0.05	
		Air-flow(H-M-L)		m³/h	850/780/600	
	Static pressure			Pa	25	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.34	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H	mm×mm×mm	1090*500*220	
		Package	（L×W×H	mm×mm×mm	1174*549*294	
	Drainage pipe (material , I.D./O.D.)			mm	20/24	
	Control type (Remote / Wired)				wired,YR-E14	
	Noise level ---sound presure (H-M-L)			dB(A)	41/35/32	
	Noise level ---sound power (H-M-L)			dB(A)	52/46/43	
	Weight (Net / Shipping)			kg / kg	23/26.5	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	φ6.35	
		Gas		mm	φ12.7	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHKMXH024BARR-FX	
Function					cooling	heating
Capacity				kW	6.5(2.0--7.3)	7.1(2.5--8.0)
Sensible heat ratio					0.72	/
Dehumidifying capacity				10 - ³×m³/h	2.5	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	670±40/550±50/460±50	
		Fan motor output power		kW	0.16	
		Air-flow(H-M-L)		m³/h	1300/1100/870	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.49	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	840*840*240	
		Package	（L×W×H）	mm×mm×mm	910*910*300	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 26/32	
	Control type (Remote /wired)				Remote,.YR-HD	
	Fresh air hole dimension			mm	none	
	Noise level ---sound presure (H-M-L)			dB(A)	46/43/36	
	Noise level ---sound power (H-M-L)			dB(A)	57/54/48	
	Weight (Net / Shipping)			kg / kg	26.8/32.6	
Panel	Panel model (color)				**PB-950JB（WHITE）**	
	Dimension	External	（L×W×H）	mm×mm×mm	950/950/80	
		Package	（L×W×H）	mm×mm×mm	985/985/115	
	Weight (Net / Shipping)			kg / kg	6.0/9.0	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	9.52	
		Gas		mm	15.88	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHFMXH024BARR-FX	
Function					cooling	heating
Capacity				kW	6.3(2.0--7.3)	7.1(2.5--8.0)
Sensible heat ratio					0.72	/
Dehumidifying capacity				10 - ³×m³/h	2.0	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX2	
		Speed(H-M-L)		r/min	1220±40/1190±50/1050±50/980±50	
		Fan motor output power		kW	0.10	
		Air-flow(H-M-L)		m³/h	800/720/650	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.49	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	990*655*199	
		Package	（L×W×H）	mm×mm×mm	1150*750*300	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 18/20	
	Control type (Remote /wired)				Remote,.YR-HD	
	Noise level ---sound presure (H-M-L)			dB(A)	48/46/44	
	Noise level ---sound power (H-M-L)			dB(A)	59/57/55	
	Weight (Net / Shipping)			kg / kg	28.3/34.3	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	9.52	
		Gas		mm	15.88	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃ DB

Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB

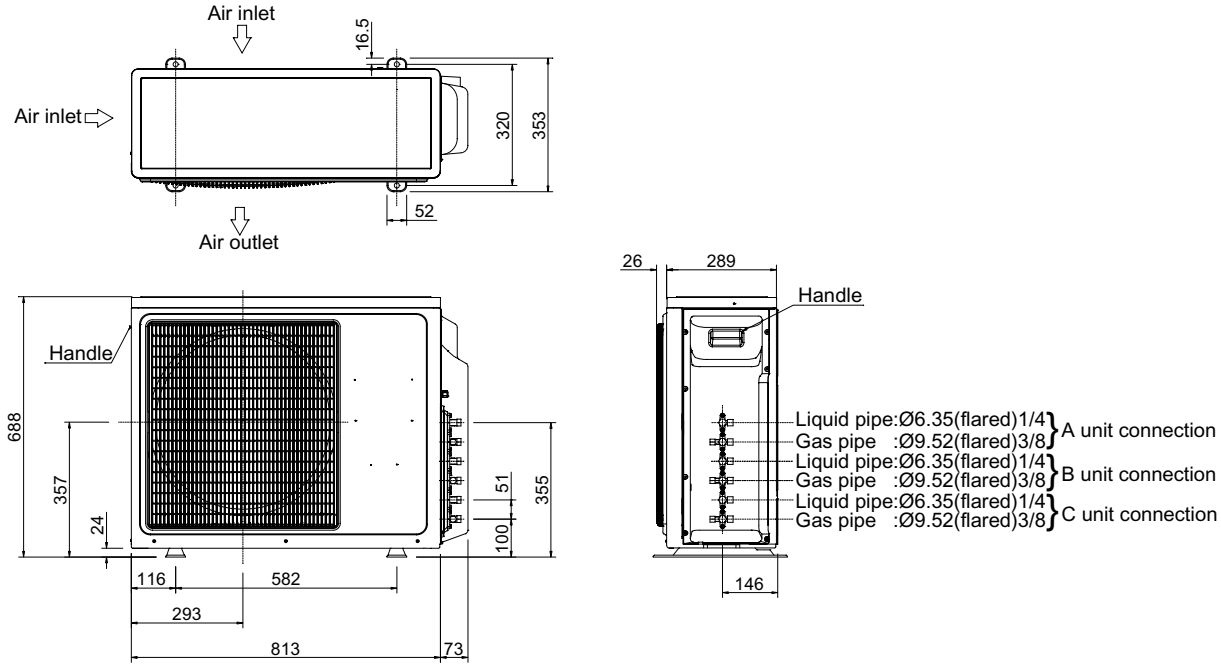
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model	YHDMXH024BARR-FX	
Function					cooling	heating
Capacity				kW	6.8(2.0--7.6)	7.1(3.0--8.3)
Sensible heat ratio					0.72	/
Dehumidifying capacity				10 - ³×m³/h	2.2	
Indoor unit	Power Supply				1PH,220-230V 50-60HZ	
	Fan	Type × Number			CENTRIFUGALX2	
		Speed(H-M-L)		r/min	1250±40/1130±40/1000±50/850±50	
		Fan motor output power		kW	0.05	
		Air-flow(H-M-L)		m³/h	1200/1050/850(white terminal 0 Pa)	
	Static pressure			Pa	25	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7	
		Total Area		m²	0.51	
		Temp. scope		℃	2-7	
	Dimension	External	（L×W×H）	mm×mm×mm	1090*500*220	
		Package	（L×W×H）	mm×mm×mm	1174*549*294	
	Drainage pipe (material , I.D./O.D.)			mm	20/24	
	Control type (Remote / Wired)				wired,YR-E14	
	Noise level ---sound presure (H-M-L)			dB(A)	49/45/41/37	
	Noise level ---sound power (H-M-L)			dB(A)	60/56/52/48	
	Weight (Net / Shipping)			kg / kg	25.2/28.4	
PIPING	Refrigerant	Type			R410A	
	Pipe	Liquid		mm	9.52	
		Gas		mm	15.88	
	Connecting Method				flared	

Norminal condition: indoor temperature (cooling): 27℃DB/19℃WB, indoor temperature (heating): 20℃DB
Outdoor temperature(cooling): 35℃DB/24℃WB, outdoor temperature(heating): 7℃DB/6℃WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

3. Dimension

YJU3YH019BARRA-X



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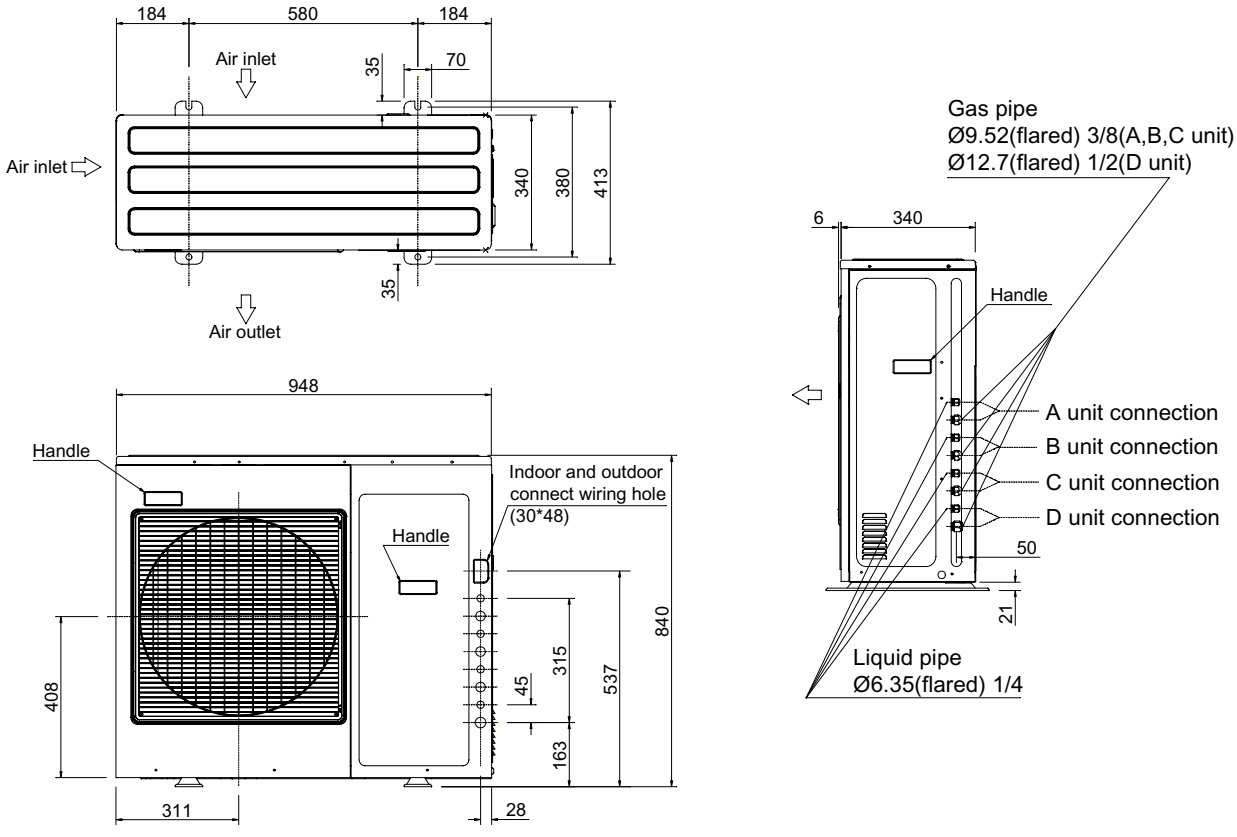

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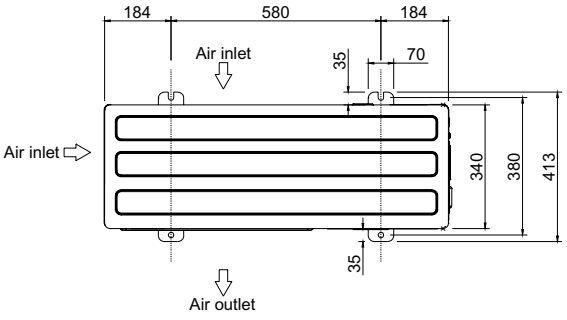
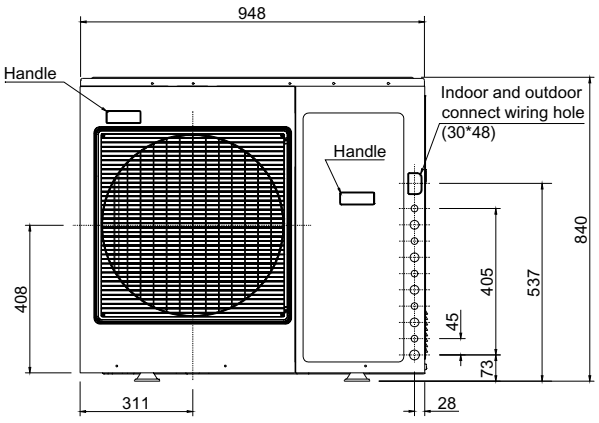
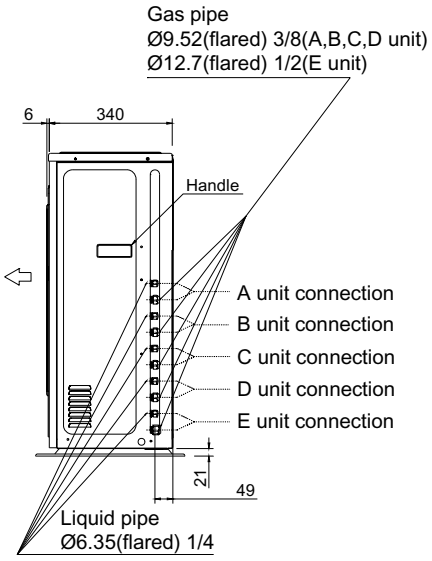
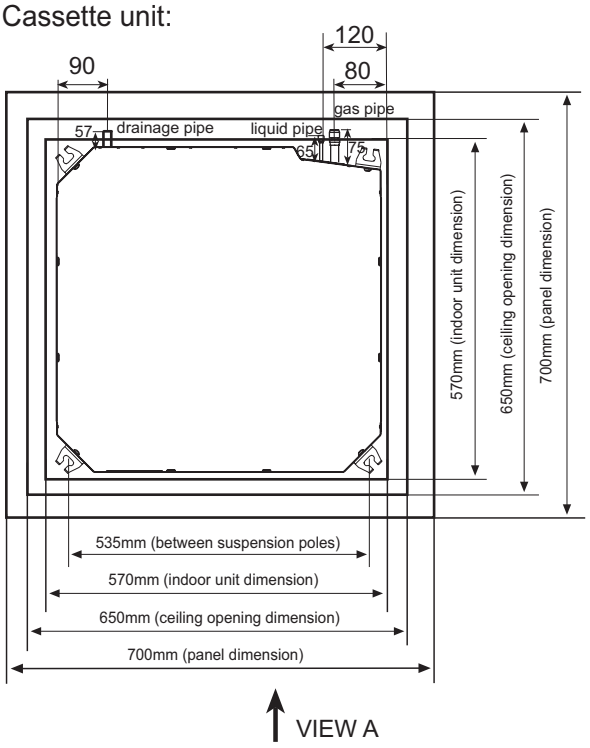
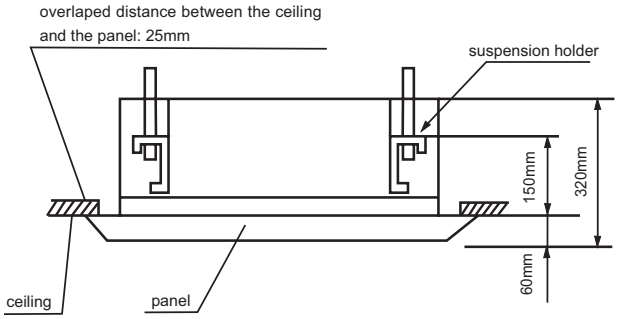


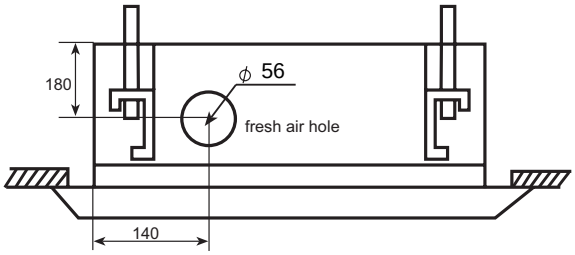




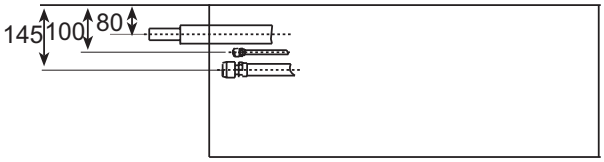
Cassette unit:



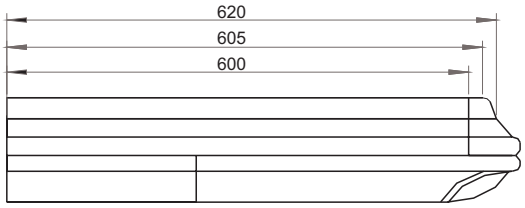


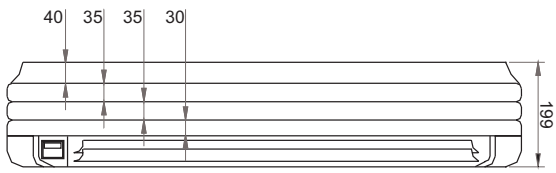


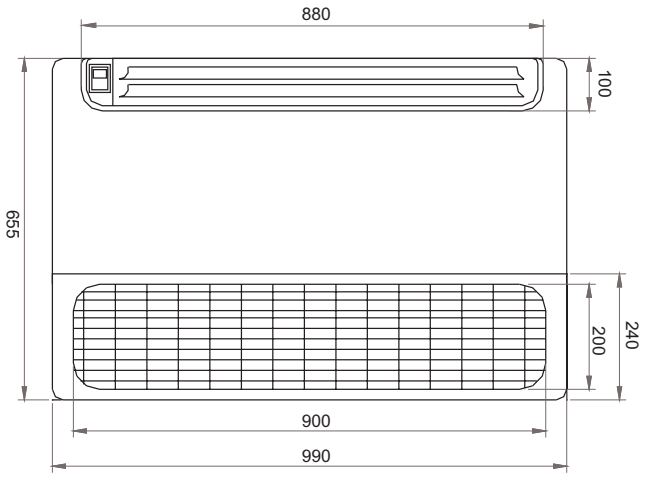
VIEW A



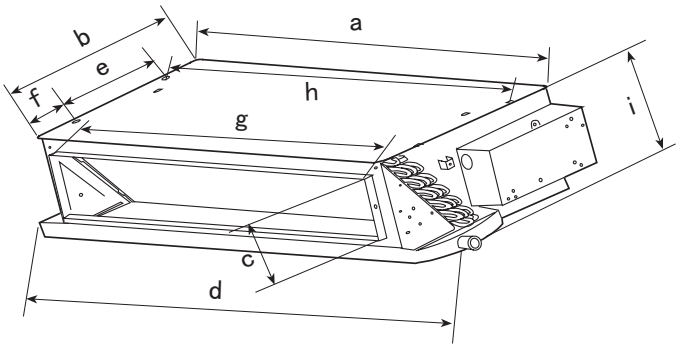
Convertible unit:







Ceiling concealed type unit:

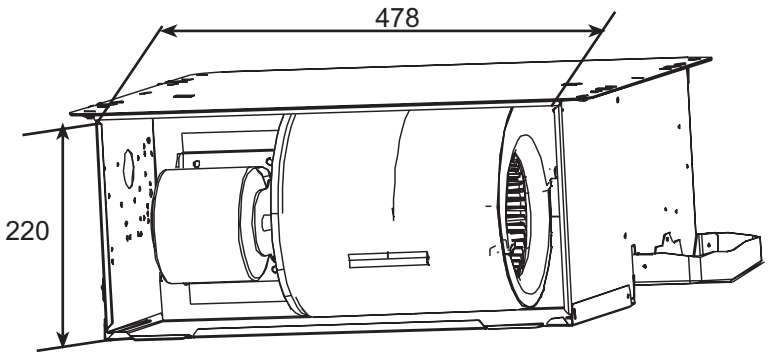


Installation dimension:(mm)

Unit model	a	b	c	d	e	f	g	h	i
YHDMXH009BARR-FX **YHDMXH012BARR-FX**	538	483.5	131	610	255	105	418	508	220
YHDMXH018BARR-FX **YHDMXH024BARR-FX**	1002	483.5	131	1105	255	105	880	970	220

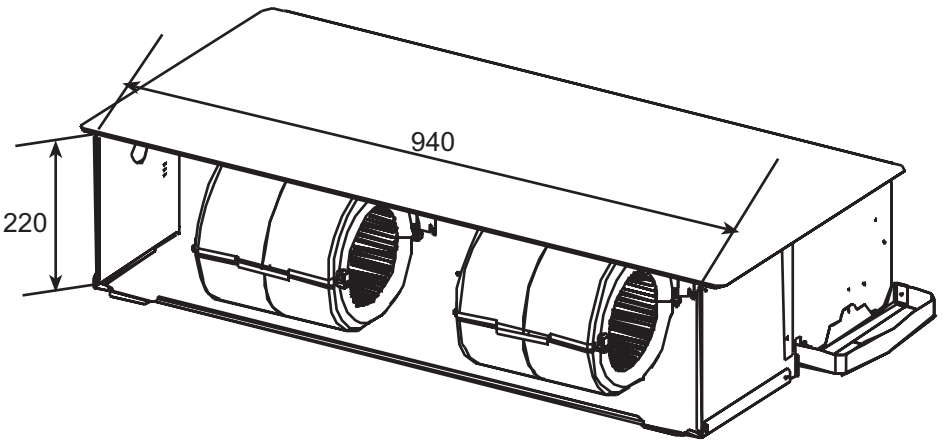
YHDMXH009BARR-FX

YHDMXH012BARR-FX

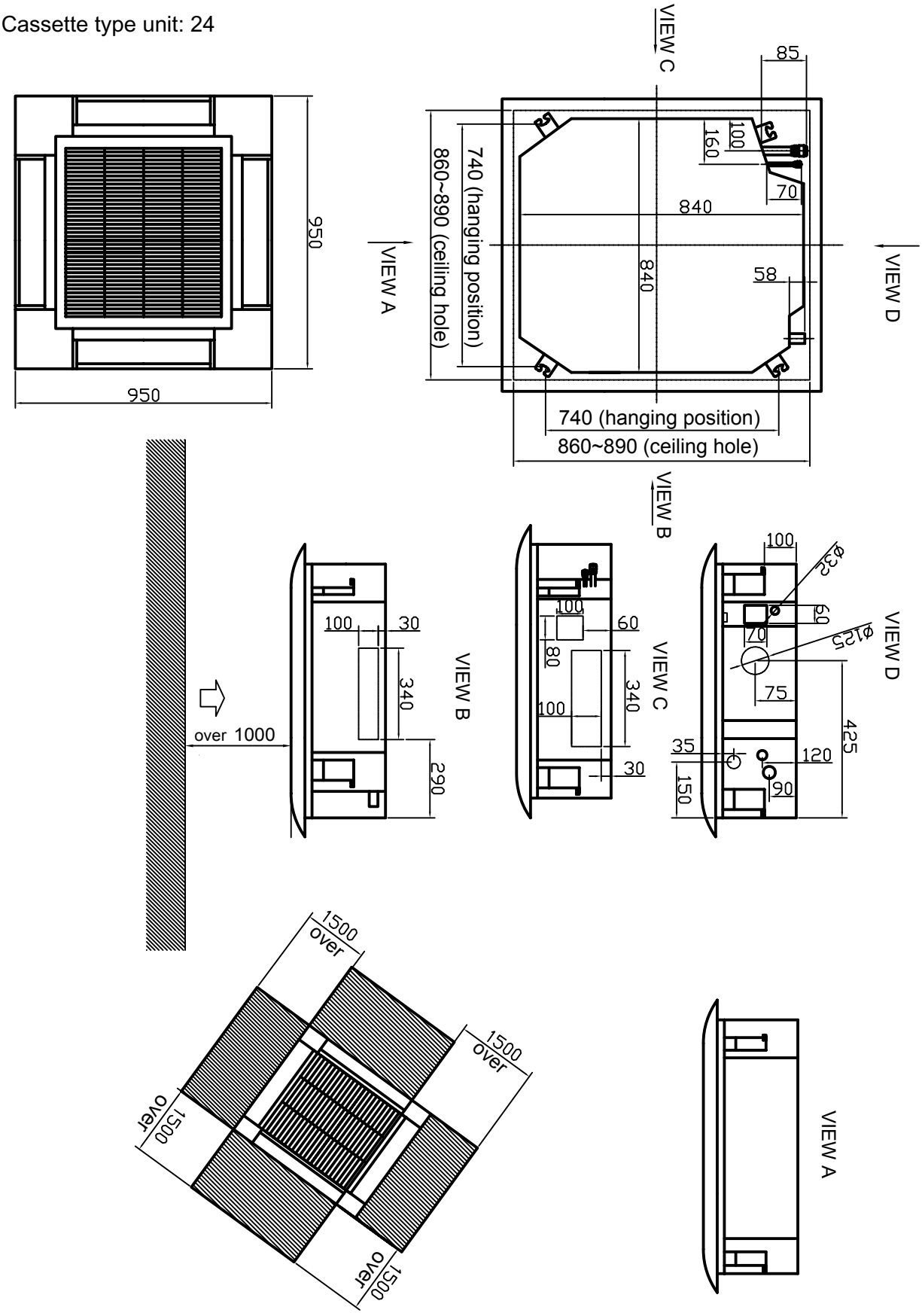


YHDMXH018BARR-FX

YHDMXH024BARR-FX



Cassette type unit: 24



4. Pipe and wiring installation

4.1 Multi combination and the data

YJU3YH019BAR-A-X **combination and the data**

COOLING

Comb.	Combinations			capacity(Kw) (Nom. cooling)			total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	2.0	—	—	1.0	2.0	2.8	0.5	0.6	1.3	2.22	2.44	5.8	3.64	A
	9	—	—	2.5	—	—	1.0	2.5	3.1	0.5	0.7	1.3	2.22	3.11	6.0	3.57	A
	12	—	—	3.5	—	—	1.0	3.5	4.1	0.5	1.0	1.5	2.22	4.44	6.7	3.50	A
	18	—	—	5.0	—	—	1.5	5.0	5.4	0.5	1.5	1.9	2.22	6.65	8.4	3.33	A
	24	—	—	5.4	—	—	1.5	5.4	6.5	0.5	1.7	2.0	2.22	7.54	8.9	3.18	B
BI (1x2)	7	7	—	2.00	2.00	—	1.0	4.0	4.4	0.5	1.3	2.6	2.22	5.77	12.0	3.08	B
	7	9	—	2.00	2.50	—	1.0	4.5	4.9	0.5	1.5	2.6	2.22	6.65	12.0	3.00	B
	7	12	—	1.96	3.44	—	1.0	5.4	5.8	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	7	18	—	1.54	3.86	—	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	9	9	—	2.50	2.50	—	1.0	5.0	7.0	0.5	1.6	2.6	2.22	6.88	12.0	3.23	A
	9	12	—	2.25	3.15	—	1.5	5.4	7.0	0.5	1.6	2.6	2.22	6.94	12.0	3.45	A
	9	18	—	1.80	3.60	—	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	12	12	—	2.70	2.70	—	1.5	5.4	7.0	0.5	1.6	2.6	2.22	6.94	12.0	3.45	A
	12	18	—	2.22	3.18	—	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
TRI (1x3)	7	7	7	1.80	1.80	1.80	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	7	7	9	1.66	1.66	2.08	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	7	7	12	1.44	1.44	2.52	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	7	7	18	1.20	1.20	3.00	1.5	5.4	7.0	0.5	1.7	2.6	2.22	7.32	12.0	3.27	A
	7	9	9	1.54	1.93	1.93	1.5	5.4	7.0	0.5	1.6	2.6	2.22	7.10	12.0	3.37	A
	7	9	12	1.35	1.69	2.36	1.5	5.4	7.0	0.5	1.6	2.6	2.22	7.10	12.0	3.37	A
	7	12	12	1.20	2.10	2.10	1.5	5.4	7.0	0.5	1.6	2.6	2.22	7.10	12.0	3.38	A
	9	9	9	1.80	1.80	1.80	1.5	5.4	7.0	0.5	1.4	2.6	2.22	6.25	12.0	3.84	A
	9	9	12	1.59	1.59	2.22	1.5	5.4	7.0	0.5	1.4	2.6	2.22	6.26	12.0	3.83	A
	9	12	12	1.42	1.99	1.99	1.5	5.4	7.0	0.5	1.5	2.6	2.22	6.65	12.0	3.60	A

HEATING

Comb.	Combinations			Rated capacity(kW)			total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit A	Unit B	Unit C	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	2.3	—	—	1.0	2.3	4.0	0.5	0.6	1.5	2.1	2.66	5.8	3.83	A
	9	—	—	2.9	—	—	1.0	2.9	4.1	0.5	0.8	1.4	2.1	3.55	6.0	3.63	A
	12	—	—	3.8	—	—	1.0	3.8	4.1	0.5	1.1	1.5	2.1	4.88	6.7	3.45	A
	18	—	—	5.5	—	—	1.5	5.5	6.0	0.5	1.6	2.6	2.1	7.10	8.4	3.44	A
	24	—	—	6.5	—	—	1.5	6.5	7.0	0.5	1.8	2.6	2.1	7.99	8.9	3.61	A
BI (1x2)	7	7	—	2.30	2.30	—	1.2	4.6	5.0	0.5	1.4	2.3	2.5	5.99	10.2	3.41	B
	7	9	—	2.30	2.90	—	1.2	5.2	5.7	0.5	1.7	2.3	2.5	7.32	13.0	3.15	B
	7	12	—	2.30	3.80	—	1.2	6.1	6.5	0.5	1.7	2.3	2.5	7.32	13.0	3.70	A
	7	18	—	1.92	4.58	—	1.8	6.5	8.1	0.5	1.7	2.6	2.7	7.32	13.0	3.94	A
	9	9	—	2.90	2.90	—	1.8	5.8	8.1	0.5	1.6	2.6	2.7	7.10	13.0	3.63	A
	9	12	—	2.81	3.69	—	1.8	6.5	8.1	0.5	1.6	2.6	2.5	7.13	13.0	4.04	A
	9	18	—	2.24	4.26	—	1.8	6.5	8.1	0.5	1.7	2.6	2.5	7.32	13.0	3.94	A
	12	12	—	3.25	3.25	—	1.8	6.5	8.1	0.5	1.6	2.6	2.7	7.13	13.0	4.04	A
	12	18	—	2.66	3.84	—	1.8	6.5	8.1	0.5	1.7	2.6	2.7	7.32	13.0	3.94	A
TRI (1x3)	7	7	7	2.17	2.17	2.17	1.8	6.5	8.1	0.5	1.6	2.6	2.5	6.88	13.0	4.19	A
	7	7	9	1.99	1.99	2.51	1.8	6.5	8.1	0.5	1.6	2.6	2.7	7.10	13.0	4.06	A
	7	7	12	1.78	1.78	2.94	1.8	6.5	8.1	0.5	1.6	2.6	2.7	7.10	13.0	4.06	A
	7	7	18	1.48	1.48	3.54	1.8	6.5	8.1	0.5	1.7	2.6	2.5	7.32	13.0	3.94	A
	7	9	9	1.85	2.33	2.33	1.8	6.5	8.1	0.5	1.6	2.6	2.5	7.10	13.0	4.06	A
	7	9	12	1.66	2.09	2.74	1.8	6.5	8.1	0.5	1.6	2.6	2.5	6.88	13.0	4.19	A
	7	12	12	1.51	2.49	2.49	1.8	6.5	8.1	0.5	1.6	2.6	2.5	6.88	13.0	4.19	A
	9	9	9	2.17	2.17	2.17	1.8	6.5	8.1	0.5	1.5	2.6	2.5	6.73	13.0	4.28	A
	9	9	12	1.96	1.96	2.57	1.8	6.5	8.1	0.5	1.5	2.6	2.5	6.74	13.0	4.28	A
	9	12	12	1.80	2.35	2.35	1.8	6.5	8.1	0.5	1.6	2.6	2.5	6.88	13.0	4.19	A

COOLING

Comb.	Combinations				Rated capacity Output/kW (Nom. cooling)				total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	2.0	—	—	—	1.0	2.0	2.8	0.5	0.56	1.3	2.22	2.48	5.8	3.57	A
	9	—	—	—	2.5	—	—	—	1.0	2.5	3.1	0.5	0.70	1.3	2.22	3.11	6.0	3.57	A
	12	—	—	—	3.5	—	—	—	1.0	3.5	4.1	0.5	1.00	1.5	2.22	4.44	6.7	3.50	A
	18	—	—	—	5.0	—	—	—	1.5	5.0	5.4	0.5	1.50	1.9	2.22	6.65	8.4	3.33	A
	24	—	—	—	6.5	—	—	—	1.5	6.5	7.4	0.5	2.00	3.0	2.22	8.87	13.2	3.25	A
BI (1x2)	7	18	—	—	2.00	5.00	—	—	1.0	7.0	7.4	0.5	2.25	3.5	2.15	10.87	16.8	3.11	B
	7	24	—	—	1.79	5.81	—	—	1.0	7.6	8.5	0.55	2.25	3.5	2.50	10.87	16.8	3.38	A
	9	18	—	—	2.50	5.00	—	—	1.0	7.5	7.9	0.50	2.25	3.5	2.15	10.87	16.8	3.33	A
	9	24	—	—	2.11	5.49	—	—	1.0	7.6	9.0	0.55	2.25	3.5	2.50	10.87	16.8	3.38	A
	12	12	—	—	3.50	3.50	—	—	1.0	7.0	6.8	0.5	2.19	3.5	2.15	10.57	16.8	3.20	A
	12	18	—	—	3.13	4.47	—	—	1.0	7.6	8.4	0.5	2.19	3.5	2.15	10.57	16.8	3.47	A
	12	24	—	—	2.66	4.94	—	—	1.0	7.6	9.0	0.55	2.39	3.5	2.50	11.53	16.8	3.18	B
	18	18	—	—	3.80	3.80	—	—	1.0	7.6	8.6	0.55	2.39	3.5	2.50	11.53	16.8	3.18	B
	18	24	—	—	3.30	4.30	—	—	1.0	7.6	9.0	0.55	2.40	3.5	2.50	11.58	16.8	3.17	B
TRI (1x3)	7	7	9	—	2.00	2.00	2.50	—	1.2	6.5	7.1	0.55	2.00	3.5	2.50	9.66	16.8	3.25	A
	7	7	12	—	2.00	2.00	3.50	—	1.2	7.5	8.1	0.55	2.19	3.5	2.50	10.57	16.8	3.43	A
	7	7	18	—	1.69	1.69	4.22	—	1.2	7.6	8.8	0.55	2.34	3.5	2.50	11.29	16.8	3.25	A
	7	7	24	—	1.45	1.45	4.70	—	1.2	7.6	9.0	0.55	2.34	3.5	3.50	11.29	16.8	3.25	A
	7	9	9	—	2.00	2.50	2.50	—	1.2	7.0	7.1	0.55	2.14	3.5	2.50	10.32	16.8	3.28	A
	7	9	12	—	1.90	2.38	3.33	—	1.2	7.6	8.6	0.55	2.19	3.5	2.50	10.57	16.8	3.48	A
	7	9	18	—	1.60	2.00	4.00	—	1.2	7.6	8.8	0.55	2.34	3.5	2.50	11.29	16.8	3.25	A
	7	12	12	—	1.69	2.96	2.96	—	1.2	7.6	8.6	0.55	2.19	3.5	2.50	10.57	16.8	3.47	A
	7	12	18	—	1.45	2.53	3.62	—	1.2	7.6	8.8	0.55	2.34	3.5	2.50	11.29	16.8	3.25	A
	9	9	9	—	2.50	2.50	2.50	—	1.2	7.5	8.1	0.55	2.14	3.5	2.50	10.32	16.8	3.51	A
	9	9	12	—	2.24	2.24	3.13	—	1.2	7.6	8.6	0.55	2.14	3.5	2.50	10.32	16.8	3.56	A
	9	9	18	—	1.90	1.90	3.80	—	1.2	7.6	8.8	0.55	2.14	3.5	2.50	10.32	16.8	3.56	A
	9	12	12	—	2.00	2.80	2.80	—	1.2	7.6	8.6	0.55	2.14	3.5	2.50	10.32	16.8	3.56	A
	12	12	12	—	2.53	2.53	2.53	—	1.2	7.6	8.5	0.55	2.14	3.5	2.50	10.32	16.8	3.56	A
	12	12	18	—	2.22	2.22	3.17	—	1.2	7.6	8.5	0.55	2.19	3.5	2.50	10.57	16.8	3.47	A
QUADRI(1x4)	7	7	7	7	1.90	1.90	1.90	1.90	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	7	7	9	1.79	1.79	1.79	2.24	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	7	7	12	1.60	1.60	1.60	2.80	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	7	7	18	1.38	1.38	1.38	3.45	1.5	7.6	9.0	0.55	2.19	3.5	2.85	10.57	16.8	3.47	A
	7	7	9	9	1.69	1.69	2.11	2.11	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	7	9	12	1.52	1.52	1.90	2.66	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	9	9	9	1.60	2.00	2.00	2.00	1.5	7.6	9.0	0.55	2.14	3.5	2.85	10.32	16.8	3.56	A
	7	9	9	12	1.45	1.81	1.81	2.53	1.5	7.6	9.0	0.55	2.10	3.5	2.85	10.13	16.8	3.62	A
	9	9	9	9	1.90	1.90	1.90	1.90	1.5	7.6	9.0	0.55	2.10	3.5	2.85	10.13	16.8	3.62	A
	9	9	9	12	1.73	1.73	1.73	2.42	1.5	7.6	9.0	0.55	2.10	3.5	2.85	10.13	16.8	3.62	A

YJU4YH025BARR-A-X **combination and the data**

HEATING

Comb.	Combinations				Rated capacity Output/kW (Nom. heating)				total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	2.3	—	—	—	1.0	2.3	4.0	0.55	0.60	1.5	2.44	2.66	5.8	3.83	A
	9	—	—	—	2.9	—	—	—	1.0	2.9	4.1	0.55	0.80	1.4	2.44	3.55	6.0	3.63	A
	12	—	—	—	3.8	—	—	—	1.0	3.8	4.1	0.55	1.10	1.5	2.44	4.88	6.7	3.45	A
	18	—	—	—	5.5	—	—	—	1.5	5.5	6.0	0.55	1.60	2.6	2.44	7.10	8.4	3.44	A
	24	—	—	—	7.0	—	—	—	1.5	7.0	8.6	0.55	1.91	2.6	2.44	8.47	8.9	3.67	A
TRI (1x2)	7	18	—	—	2.30	5.50	—	—	1.2	7.8	8.4	0.50	2.20	3.5	2.15	9.76	16.8	3.55	B
	7	24	—	—	2.13	6.47	—	—	1.2	8.6	9.5	0.55	2.31	3.5	2.50	10.24	16.8	3.72	A
	9	18	—	—	2.90	5.50	—	—	1.2	8.4	9.2	0.50	2.20	3.5	2.15	9.76	16.8	3.82	A
	9	24	—	—	2.52	6.08	—	—	1.2	8.6	9.5	0.55	2.31	3.5	2.50	10.24	16.8	3.72	A
	12	12	—	—	3.80	3.80	—	—	1.2	7.6	8.2	0.50	2.15	3.5	2.15	9.54	16.8	3.53	B
	12	18	—	—	3.51	5.09	—	—	1.2	8.6	9.5	0.50	2.30	3.5	2.15	10.20	16.8	3.74	A
	12	24	—	—	3.03	5.57	—	—	1.2	8.6	9.5	0.55	2.31	3.5	2.50	10.24	16.8	3.72	A
	18	18	—	—	4.30	4.30	—	—	1.2	8.6	9.5	0.55	2.20	3.5	2.50	9.76	16.8	3.91	A
	18	24			3.78	4.82			1.5	8.6	9.5	0.55	2.40	3.5	2.50	10.65	16.8	3.58	B
TRI (1x3)	7	7	9	—	2.30	2.30	2.90	—	1.5	7.5	8.4	0.55	2.16	3.5	2.50	9.58	16.8	3.47	B
	7	7	12	—	2.30	2.30	3.80	—	1.5	8.4	9.3	0.55	2.16	3.5	2.50	9.58	16.8	3.89	A
	7	7	18	—	1.96	1.96	4.68	—	1.5	8.6	9.5	0.55	2.26	3.5	2.50	10.02	16.8	3.81	A
	7	7	24	—	1.71	1.71	5.19	—	1.8	8.6	9.5	0.55	2.31	3.5	2.50	10.24	16.8	3.72	A
	7	9	9	—	2.30	2.90	2.90	—	1.5	8.1	9.5	0.55	2.21	3.5	2.50	9.80	16.8	3.67	A
	7	9	12	—	2.20	2.77	3.63	—	1.5	8.6	9.5	0.55	2.21	3.5	2.50	9.80	16.8	3.89	A
	7	9	18	—	1.85	2.33	4.42	—	1.5	8.6	9.5	0.55	2.26	3.5	2.50	10.02	16.8	3.81	A
	7	12	12	—	2.00	3.30	3.30	—	1.5	8.6	9.5	0.55	2.21	3.5	2.50	9.80	16.8	3.89	A
	7	12	18	—	1.71	2.82	4.08	—	1.5	8.6	9.5	0.55	2.26	3.5	2.50	10.02	16.8	3.81	A
	9	9	9	—	2.87	2.87	2.87	—	1.5	8.6	9.5	0.55	2.21	3.5	2.50	9.80	16.8	3.89	A
	9	9	12	—	2.60	2.60	3.40	—	1.5	8.6	9.5	0.55	2.21	3.5	2.50	9.80	16.8	3.89	A
	9	9	18	—	2.21	2.21	4.19	—	1.5	8.6	9.5	0.55	2.26	3.5	2.50	10.02	16.8	3.81	A
	9	12	12	—	2.38	3.11	3.11	—	1.5	8.6	9.5	0.55	2.11	3.5	2.50	9.36	16.8	4.08	A
	12	12	12	—	2.87	2.87	2.87	—	1.5	8.6	9.5	0.55	2.26	3.5	2.50	10.02	16.8	3.81	A
	12	12	18	—	2.49	2.49	3.61	—	1.5	8.6	9.5	0.55	2.31	3.5	2.50	10.24	16.8	3.72	A
QUADRI(1x4)	7	7	7	7	2.15	2.15	2.15	2.15	1.8	8.6	9.5	0.55	2.21	3.5	2.85	9.80	16.8	3.89	A
	7	7	7	9	2.02	2.02	2.02	2.54	1.8	8.6	9.5	0.55	2.21	3.5	2.85	9.80	16.8	3.89	A
	7	7	7	12	1.85	1.85	1.85	3.05	1.8	8.6	9.5	0.55	2.16	3.5	2.85	9.58	16.8	3.98	A
	7	7	7	18	1.60	1.60	1.60	3.81	1.8	8.6	9.5	0.55	2.21	3.5	2.85	9.80	16.8	3.89	A
	7	7	9	9	1.90	1.90	2.40	2.40	1.8	8.6	9.5	0.55	2.21	3.5	2.85	9.80	16.8	3.89	A
	7	7	9	12	1.75	1.75	2.21	2.89	1.8	8.6	9.5	0.55	2.21	3.5	2.85	9.80	16.8	3.89	A
	7	9	9	9	1.80	2.27	2.27	2.27	1.8	8.6	9.5	0.55	2.11	3.5	2.85	9.36	16.8	4.08	A
	7	9	9	12	1.66	2.10	2.10	2.75	1.8	8.6	9.5	0.55	2.11	3.5	2.85	9.36	16.8	4.08	A
	9	9	9	9	2.15	2.15	2.15	2.15	1.8	8.6	9.5	0.55	2.06	3.5	2.85	9.13	16.8	4.18	A
	9	9	9	12	2.00	2.00	2.00	2.61	1.8	8.6	9.5	0.55	2.11	3.5	2.85	9.36	16.8	4.08	A

YJU4YH030BARR-A-X **combination and the data**

COOLING

Comb.	Combinations				Rated capacity Output/kW (Nom. cooling)				total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	2.0	—	—	—	1.00	2.00	2.80	0.50	0.56	1.30	2.22	2.48	5.80	3.57	A
	9	—	—	—	2.5	—	—	—	1.00	2.50	3.10	0.50	0.70	1.34	2.22	3.11	6.00	3.57	A
	12	—	—	—	3.5	—	—	—	1.00	3.50	4.10	0.50	1.00	1.50	2.22	4.44	6.70	3.50	A
	18	—	—	—	5.0	—	—	—	1.50	5.00	5.40	0.50	1.50	1.90	2.22	6.65	8.40	3.33	A
	24	—	—	—	6.5	—	—	—	1.50	6.50	7.40	0.50	2.00	3.00	2.22	8.87	13.20	3.25	A
BI (1x2)	7	24			1.91	6.19			1.00	8.10	9.80	0.55	2.60	3.80	2.15	11.54	17.90	3.12	B
	9	18			2.50	5.00			1.00	7.50	9.80	0.55	2.40	3.80	2.15	10.65	17.90	3.13	B
	9	24			2.25	5.85			1.00	8.10	9.80	0.55	2.50	3.80	2.15	11.09	17.90	3.24	A
	12	18			3.16	4.94			1.00	8.10	9.80	0.55	2.40	3.80	2.15	10.65	17.90	3.37	A
	12	24			2.67	5.43			1.00	8.10	9.80	0.55	2.50	3.80	2.15	11.09	17.90	3.24	A
	18	18			4.05	4.05			1.00	8.10	9.80	0.55	2.40	3.80	2.15	10.65	17.90	3.38	A
	18	24			3.52	4.58			1.00	8.10	9.80	0.55	2.50	3.80	2.15	11.09	17.90	3.24	A
	24	24			4.05	4.05			1.00	8.10	9.80	0.55	2.60	3.80	2.15	11.54	17.90	3.12	B
TRI (1x3)	7	7	18		1.80	1.80	4.50		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.38	A
	7	7	24		1.54	1.54	5.01		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
	7	9	12		2.00	2.50	3.50		1.50	8.00	9.80	0.55	2.30	3.80	2.50	10.20	17.90	3.48	A
	7	9	18		1.71	2.13	4.26		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.37	A
	7	9	24		1.47	1.84	4.79		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
	7	12	12		1.80	3.15	3.15		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.38	A
	7	12	18		1.54	2.70	3.86		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.37	A
	7	12	24		1.35	2.36	4.39		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
	9	9	9		2.50	2.50	2.50		1.50	7.50	9.80	0.55	2.30	3.80	2.50	10.20	17.90	3.26	A
	9	9	12		2.38	2.38	3.34		1.50	8.10	9.80	0.55	2.35	3.80	2.50	10.43	17.90	3.44	A
	9	9	18		2.03	2.03	4.05		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.38	A
	9	9	24		1.76	1.76	4.58		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
	9	12	12		2.13	2.98	2.98		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.37	A
	9	12	18		1.84	2.58	3.68		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.37	A
	9	12	24		1.62	2.27	4.21		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
	12	12	12		2.70	2.70	2.70		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.38	A
	12	12	18		2.36	2.36	3.38		1.50	8.10	9.80	0.55	2.40	3.80	2.50	10.65	17.90	3.37	A
	12	12	24		2.10	2.10	3.90		1.50	8.10	9.80	0.55	2.45	3.80	2.50	10.87	17.90	3.31	A
	12	18	18		2.10	3.00	3.00		1.50	8.10	9.80	0.55	2.50	3.80	2.50	11.09	17.90	3.24	A
QUADRI(1x4)	7	7	7	7	2.00	2.00	2.00	2.00	1.50	8.00	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.56	A
	7	7	7	9	1.91	1.91	1.91	2.38	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	7	7	12	1.71	1.71	1.71	2.98	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	7	7	18	1.47	1.47	1.47	3.68	1.50	8.10	9.80	0.55	2.40	3.80	2.85	10.65	17.90	3.37	A
	7	7	7	24	1.30	1.30	1.30	4.21	1.50	8.10	9.80	0.55	2.50	3.80	2.85	11.09	17.90	3.24	A
	7	7	9	9	1.80	1.80	2.25	2.25	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	7	9	12	1.62	1.62	2.03	2.84	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	7	9	18	1.41	1.41	1.76	3.52	1.50	8.10	9.80	0.55	2.40	3.80	2.85	10.65	17.90	3.37	A
	7	7	9	24	1.25	1.25	1.56	4.05	1.50	8.10	9.80	0.55	2.45	3.80	2.85	10.87	17.90	3.31	A
	7	7	12	12	1.47	1.47	2.58	2.58	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	7	12	18	1.30	1.30	2.27	3.24	1.50	8.10	9.80	0.55	2.40	3.80	2.85	10.65	17.90	3.38	A
	7	9	9	9	1.71	2.13	2.13	2.13	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	7	9	9	12	1.54	1.93	1.93	2.70	1.50	8.10	9.80	0.55	2.28	3.80	2.85	10.12	17.90	3.55	A
	7	9	9	18	1.35	1.69	1.69	3.38	1.50	8.10	9.80	0.55	2.40	3.80	2.85	10.65	17.90	3.37	A
	7	9	12	12	1.41	1.76	2.47	2.47	1.50	8.10	9.80	0.55	2.30	3.80	2.85	10.20	17.90	3.52	A
	7	12	12	12	1.30	2.27	2.27	2.27	1.50	8.10	9.80	0.55	2.30	3.80	2.85	10.20	17.90	3.52	A
	9	9	9	9	2.03	2.03	2.03	2.03	1.50	8.10	9.80	0.55	2.22	3.80	2.85	9.85	17.90	3.65	A
	9	9	9	12	1.84	1.84	1.84	2.58	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	9	9	12	12	1.69	1.69	2.36	2.36	1.50	8.10	9.80	0.55	2.25	3.80	2.85	9.98	17.90	3.60	A
	9	9	12	18	1.50	1.50	2.10	3.00	1.50	8.10	9.80	0.55	2.30	3.80	2.85	10.20	17.90	3.52	A
	9	12	12	12	1.56	2.18	2.18	2.18	1.50	8.10	9.80	0.55	2.35	3.80	2.85	10.43	17.90	3.45	A
	12	12	12	12	2.03	2.03	2.03	2.03	1.50	8.10	9.80	0.55	2.35	3.80	2.85	10.43	17.90	3.45	A

HEATING

Comb.	Combinations				Rated capacity Output/kW (Nom. heating)				total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit A	Unit B	Unit C	Unit D	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	2.3	—	—	—	1.00	2.30	4.00	0.55	0.60	1.50	2.44	2.66	5.80	3.83	A
	9	—	—	—	2.9	—	—	—	1.00	2.90	4.10	0.55	0.80	1.40	2.44	3.55	6.00	3.63	A
	12	—	—	—	3.8	—	—	—	1.00	3.80	4.10	0.55	1.10	1.50	2.44	4.88	6.70	3.45	A
	18	—	—	—	5.5	—	—	—	1.50	5.50	6.00	0.55	1.60	2.60	2.44	7.10	8.40	3.44	A
	24	—	—	—	7.0	—	—	—	1.50	7.00	8.60	0.55	1.80	2.60	2.44	7.99	8.90	3.89	A
BI (1x2)	7	24			2.30	7.00			1.20	9.30	10.50	0.50	2.60	3.80	2.15	11.54	15.00	3.58	B
	9	18			2.90	5.50			1.20	8.40	10.50	0.50	2.60	3.80	2.15	11.54	15.00	3.23	C
	9	24			2.87	6.93			1.20	9.80	10.50	0.50	2.70	3.80	2.15	11.98	15.00	3.63	A
	12	18			3.80	5.50			1.20	9.30	10.50	0.50	2.60	3.80	2.15	11.54	15.00	3.58	B
	12	24			3.45	6.35			1.20	9.80	10.50	0.50	2.70	3.80	2.15	11.98	15.00	3.63	A
	18	18			4.90	4.90			1.20	9.80	10.50	0.50	2.60	3.80	2.15	11.54	15.00	3.77	A
	18	24			4.31	5.49			1.20	9.80	10.50	0.50	2.70	3.80	2.15	11.98	15.00	3.63	A
	24	24			4.90	4.90			1.20	9.80	10.50	0.50	2.75	3.80	2.44	12.20	15.00	3.56	B
TRI (1x3)	7	7	18		2.23	2.23	5.34		1.20	9.80	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.77	A
	7	7	24		1.94	1.94	5.91		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	7	9	12		2.30	2.90	3.80		1.50	9.00	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.46	B
	7	9	18		2.11	2.66	5.04		1.50	9.80	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.77	A
	7	9	24		1.85	2.33	5.62		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	7	12	12		2.28	3.76	3.76		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	7	12	18		1.94	3.21	4.65		1.50	9.80	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.77	A
	7	12	24		1.72	2.84	5.24		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	9	9	9		2.90	2.90	2.90		1.50	8.70	10.50	0.55	2.20	3.80	2.50	9.76	15.00	3.95	A
	9	9	12		2.90	2.90	3.80		1.50	9.60	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.56	B
	9	9	18		2.52	2.52	4.77		1.50	9.80	10.50	0.55	2.43	3.80	2.50	10.78	15.00	4.03	A
	9	9	24		2.22	2.22	5.36		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	9	12	12		2.71	3.55	3.55		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	9	12	18		2.33	3.05	4.42		1.50	9.80	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.77	A
	9	12	24		2.07	2.72	5.01		1.50	9.80	10.50	0.55	2.70	3.80	2.50	11.98	15.00	3.63	A
	12	12	12		3.27	3.27	3.27		1.50	9.80	10.50	0.55	2.58	3.80	2.50	11.45	15.00	3.80	A
	12	12	18		2.84	2.84	4.11		1.50	9.80	10.50	0.55	2.60	3.80	2.50	11.54	15.00	3.77	A
	12	12	24		2.55	2.55	4.70		1.50	9.80	10.50	0.55	2.65	3.80	2.50	11.76	15.00	3.70	A
	12	18	18		2.52	3.64	3.64		1.50	9.80	10.50	0.55	2.75	3.80	2.50	12.20	15.00	3.56	B
QUADRI(1x4)	7	7	7	7	2.30	2.30	2.30	2.30	1.50	9.20	10.50	0.55	2.38	3.80	2.85	10.56	15.00	3.87	A
	7	7	7	9	2.30	2.30	2.30	2.90	1.50	9.80	10.50	0.55	2.70	3.80	2.85	11.98	15.00	3.63	A
	7	7	7	12	2.11	2.11	2.11	3.48	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	7	18	1.82	1.82	1.82	4.35	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	7	24	1.62	1.62	1.62	4.94	1.80	9.80	10.50	0.55	2.70	3.80	2.85	11.98	15.00	3.63	A
	7	7	9	9	2.17	2.17	2.73	2.73	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	9	12	1.99	1.99	2.52	3.30	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	9	18	1.73	1.73	2.19	4.15	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	12	12	1.85	1.85	3.05	3.05	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	7	12	18	1.62	1.62	2.68	3.88	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	9	9	9	2.05	2.58	2.58	2.58	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	9	9	12	1.89	2.39	2.39	3.13	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	7	9	9	18	1.66	2.09	2.09	3.96	1.80	9.80	10.50	0.55	2.70	3.80	2.85	11.98	15.00	3.63	A
	7	9	12	12	1.76	2.22	2.91	2.91	1.80	9.80	10.50	0.55	2.50	3.80	2.85	11.09	15.00	3.92	A
	7	12	12	12	1.65	2.72	2.72	2.72	1.80	9.80	10.50	0.55	2.50	3.80	2.85	11.09	15.00	3.92	A
	9	9	9	9	2.45	2.45	2.45	2.45	1.80	9.80	10.50	0.55	2.43	3.80	2.85	10.79	15.00	4.03	A
	9	9	9	12	2.27	2.27	2.27	2.98	1.80	9.80	10.50	0.55	2.50	3.80	2.85	11.09	15.00	3.92	A
	9	9	12	12	2.12	2.12	2.78	2.78	1.80	9.80	10.50	0.55	2.50	3.80	2.85	11.09	15.00	3.92	A
	9	9	12	18	1.88	1.88	2.47	3.57	1.80	9.80	10.50	0.55	2.55	3.80	2.85	11.31	15.00	3.84	A
	9	12	12	12	1.99	2.60	2.60	2.60	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A
	12	12	12	12	2.45	2.45	2.45	2.45	1.80	9.80	10.50	0.55	2.60	3.80	2.85	11.54	15.00	3.77	A

YJU5YH034BARR-A-X combination and the data

COOLING

Comb.	Combinations					Rated capacity Output/kW (Nom. cooling)					total cooling capacity(kW)			total power input (kW)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	—	2.0	—	—	—	—	1.0	2.0	2.8	0.50	0.65	1.3	2.2	2.88	5.8	3.08	B
	9	—	—	—	—	2.5	—	—	—	—	1.0	2.5	3.1	0.50	0.80	1.3	2.2	3.55	6.0	3.13	B
	12	—	—	—	—	3.5	—	—	—	—	1.0	3.5	4.1	0.50	1.04	1.5	2.2	4.61	6.7	3.37	A
	18	—	—	—	—	5.0	—	—	—	—	1.5	5.0	5.4	0.50	1.50	1.9	2.2	6.65	8.4	3.33	A
	24	—	—	—	—	6.5	—	—	—	—	1.5	6.5	7.4	0.50	2.00	3.0	2.2	8.87	13.2	3.25	A
BI (1x2)	7	18	—	—	—	2.0	5.0	—	—	—	1.0	7.0	7.5	0.50	2.30	4.0	2.15	10.20	19.0	3.04	B
	7	24	—	—	—	2.0	6.5	—	—	—	1.0	8.5	9.0	0.50	2.80	4.0	2.15	12.42	19.0	3.04	B
	9	18	—	—	—	2.5	5.0	—	—	—	1.0	7.5	8.0	0.50	2.40	4.0	2.15	10.65	19.0	3.13	B
	9	24	—	—	—	2.5	6.5	—	—	—	1.0	9.0	9.5	0.50	2.70	4.0	2.15	11.98	19.0	3.33	A
	12	18	—	—	—	3.5	5.0	—	—	—	1.0	8.5	9.0	0.50	2.70	4.0	2.15	11.98	19.0	3.15	B
	12	24	—	—	—	3.5	6.5	—	—	—	1.0	10.0	10.5	0.50	3.10	4.0	2.15	13.75	19.0	3.23	A
	18	18	—	—	—	5.0	5.0	—	—	—	1.0	10.0	10.5	0.50	3.10	4.0	2.15	13.75	19.0	3.23	A
	18	24	—	—	—	4.3	5.7	—	—	—	1.0	10.0	10.5	0.50	3.10	4.0	2.15	13.75	19.0	3.22	A
	24	24				5.0	5.0				1.0	10.0	10.5	0.50	3.20	4.0	2.15	14.20	19.0	3.13	B
TRI (1x3	7	7	12	—	—	2.0	2.0	3.50	—	—	1.5	7.5	8.1	0.55	2.74	4.0	2.5	12.16	19.0	2.74	D
	7	7	18	—	—	2.0	2.0	5.00	—	—	1.5	9.0	9.8	0.55	2.74	4.0	2.5	12.16	19.0	3.28	A
	7	7	24	—	—	1.9	1.9	6.19	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	7	9	9	—	—	2.0	2.5	2.50	—	—	1.5	7.0	7.6	0.55	2.74	4.0	2.5	12.16	19.0	2.55	E
	7	9	12	—	—	2.0	2.5	3.50	—	—	1.5	8.0	8.6	0.55	2.74	4.0	2.5	12.16	19.0	2.92	C
	7	9	18	—	—	2.0	2.5	5.00	—	—	1.5	9.5	10.2	0.55	2.90	4.0	2.5	12.87	19.0	3.28	A
	7	9	24	—	—	1.82	2.27	5.91	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	7	12	12	—	—	2.00	3.50	3.50	—	—	1.5	9.0	9.6	0.55	3.04	4.0	2.5	13.49	19.0	2.96	C
	7	12	18	—	—	1.90	3.33	4.76	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	7	12	24	—	—	1.67	2.92	5.42	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	9	9	9	—	—	2.50	2.50	2.50	—	—	1.5	7.5	8.1	0.55	3.04	4.0	2.5	13.49	19.0	2.47	E
	9	9	12	—	—	2.50	2.50	3.50	—	—	1.5	8.5	9.1	0.55	3.04	4.0	2.5	13.49	19.0	2.80	D
	9	9	18	—	—	2.50	2.50	5.00	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	9	9	24	—	—	2.17	2.17	5.65	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	9	12	12	—	—	2.50	3.50	3.50	—	—	1.5	9.5	10.2	0.55	3.04	4.0	2.5	13.49	19.0	3.13	B
	9	12	18	—	—	2.27	3.18	4.55	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	9	12	24	—	—	2.00	2.80	5.20	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	12	12	12	—	—	3.33	3.33	3.33	—	—	1.5	10.0	10.5	0.55	3.04	4.0	2.5	13.49	19.0	3.29	A
	12	12	18	—	—	2.92	2.92	4.17	—	—	1.5	10.0	10.5	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	12	12	24			2.59	2.59	4.81			1.5	10.0	11.0	0.55	3.27	4.0	2.5	14.51	19.0	3.06	B
	12	18	18			2.59	3.70	3.70			1.5	10.0	11.0	0.55	3.27	4.0	2.5	14.51	19.0	3.06	B
	18	18	18			3.33	3.33	3.33			1.8	10.0	11.0	0.55	3.32	4.0	2.5	14.73	19.0	3.01	B
QUADRI (1x4)	7	7	7	7	—	2.00	2.00	2.00	2.0	—	1.8	8.0	8.8	0.55	2.89	4.0	2.5	12.82	19.0	2.77	D
	7	7	7	9	—	2.00	2.00	2.00	2.5	—	1.8	8.5	9.3	0.55	2.89	4.0	2.5	12.82	19.0	2.94	C
	7	7	7	12	—	2.00	2.00	2.00	3.5	—	1.8	9.5	10.3	0.55	2.96	4.0	2.5	13.13	19.0	3.21	A
	7	7	7	18	—	1.82	1.82	1.82	4.5	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	7	7	24	—	1.60	1.60	1.60	5.2	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	7	9	9	—	2.00	2.00	2.50	2.5	—	1.8	9.0	9.8	0.55	2.96	4.0	2.5	13.13	19.0	3.04	B
	7	7	9	12	—	2.00	2.00	2.50	3.5	—	1.8	10.0	10.5	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	7	7	9	18	—	1.74	1.74	2.17	4.3	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	7	9	24	—	1.54	1.54	1.92	5.0	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	7	12	12	—	1.82	1.82	3.18	3.2	—	1.8	10.0	10.8	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	7	7	12	18	—	1.60	1.60	2.80	4.0	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	9	9	9	—	2.00	2.50	2.50	2.5	—	1.8	9.5	10.3	0.55	2.96	4.0	2.5	13.13	19.0	3.21	A
	7	9	9	12	—	1.90	2.38	2.38	3.33	—	1.8	10.0	10.8	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	9	9	18	—	1.67	2.08	2.08	4.17	—	1.8	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	9	12	12	—	1.74	2.17	3.04	3.04	—	1.8	10.0	10.8	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	7	12	12	12	—	1.60	2.80	2.80	2.8	—	1.8	10.0	11.0	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A

	9	9	9	9	—	2.50	2.50	2.50	2.5	—	1.8	10.0	11.0	0.55	3.01	4.0	2.5	13.35	19.0	3.32	A
	9	9	9	12	—	2.27	2.27	2.27	3.18	—	1.8	10.0	11.0	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	9	9	9	18	—	2.00	2.00	2.00	4.0	—	1.8	10.0	11.0	0.55	2.94	4.0	2.5	13.04	19.0	3.40	A
	9	9	12	12	—	2.08	2.08	2.92	2.92	—	1.8	10.0	11.0	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	9	12	12	12	—	1.92	2.69	2.69	2.69	—	1.8	10.0	11.0	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	12	12	12	12		2.50	2.50	2.50	2.5		1.8	10.0	11.0	0.55	2.97	4.0	2.5	13.18	19.0	3.37	A
	7	7	7	7	7	2.00	2.00	2.00	2.0	2.00	2.0	10.0	11.0	0.55	3.01	4.0	2.5	13.35	19.0	3.32	A
	7	7	7	7	9	1.90	1.90	1.90	1.9	2.38	2.0	10.0	11.0	0.55	2.99	4.0	2.5	13.27	19.0	3.34	A
	7	7	7	7	12	1.74	1.74	1.74	1.74	3.04	2.0	10.0	11.0	0.55	2.97	4.0	2.5	13.18	19.0	3.37	A
	7	7	7	9	9	1.82	1.82	1.82	2.27	2.27	2.0	10.0	11.0	0.55	2.96	4.0	2.5	13.13	19.0	3.38	A
	7	7	7	9	12	1.67	1.67	1.67	2.08	2.92	2.0	10.0	11.0	0.55	2.97	4.0	2.5	13.18	19.0	3.37	A
(1×5)	7	7	7	12	12	1.54	1.54	1.54	2.69	2.69	2.0	10.0	11.0	0.55	3.01	4.0	2.5	13.35	19.0	3.32	A
	7	7	9	9	9	1.74	1.74	2.17	2.17	2.17	2.0	10.0	11.0	0.55	3.06	4.0	2.5	13.58	19.0	3.27	A
	7	7	9	9	12	1.60	1.60	2.00	2.00	2.80	2.0	10.0	11.0	0.55	3.06	4.0	2.5	13.58	19.0	3.27	A
	7	9	9	9	9	1.67	2.08	2.08	2.08	2.08	2.0	10.0	11.0	0.55	3.09	4.0	2.5	13.71	19.0	3.24	A
	9	9	9	9	9	2.00	2.00	2.00	2.00	2.00	2.0	10.0	11.0	0.55	3.06	4.0	2.5	13.58	19.0	3.27	A
	9	9	9	9	12	1.85	1.85	1.85	1.85	2.59	2.0	10.0	11.0	0.55	3.12	4.0	2.5	13.84	19.0	3.20	A
	9	9	9	12	12	1.72	1.72	1.72	2.41	2.41	2.0	10.0	11.0	0.55	3.12	4.0	2.5	13.84	19.0	3.20	A

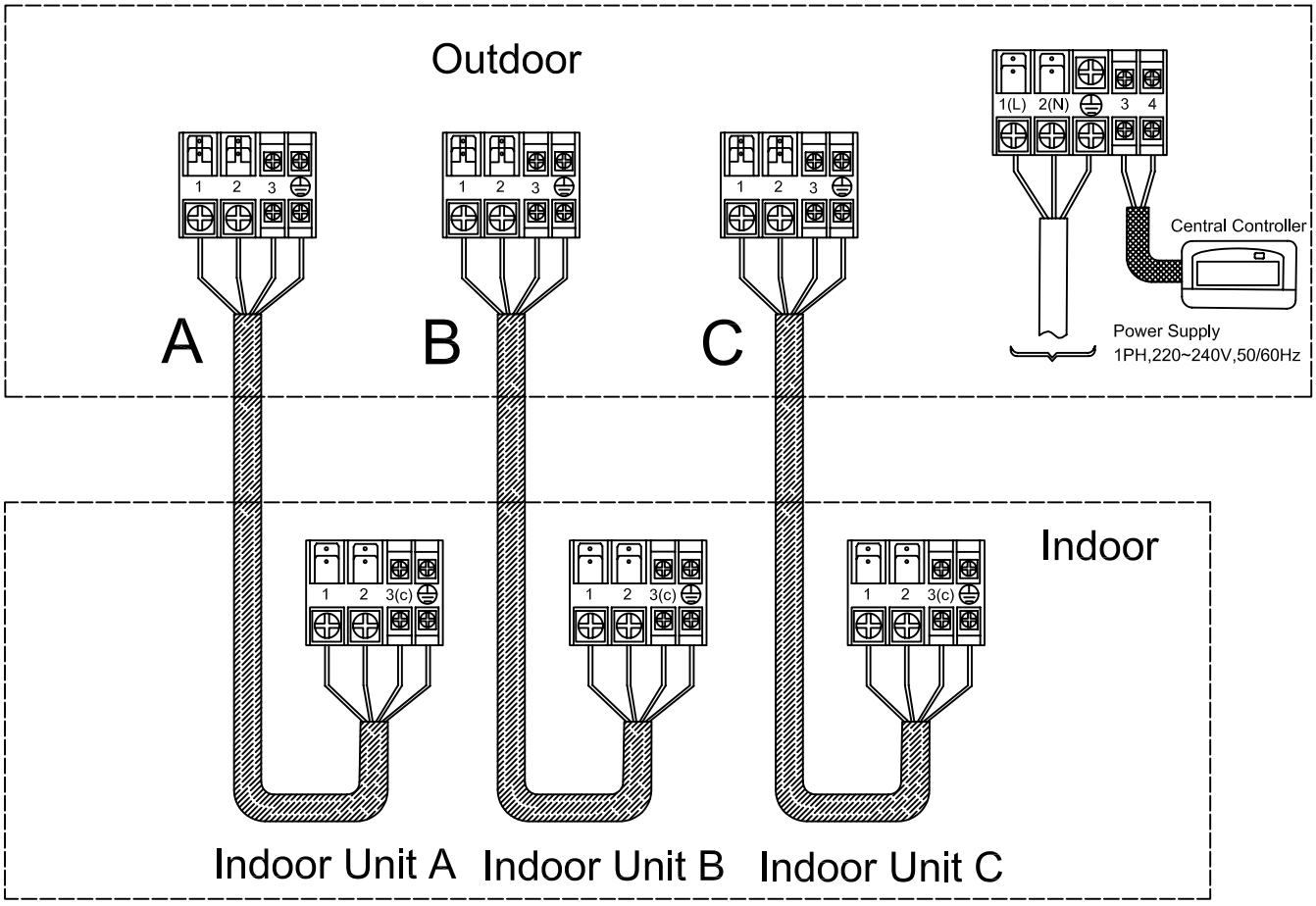
HEATING

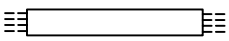
Comb.	Combinations					Rated capacity Output/kW (Nom. heating)					total heating capacity(KW)			total power input (W)			total current (A)@230V			EER (W/W)	energy label
	Unit A	Unit B	Unit C	Unit D	Unit E	Unit A	Unit B	Unit C	Unit D	Unit E	min. data	rated data	max. data	min. data	rated data	max. Data	min. data	rated data	max. Data	rated capacity	
1x1	7	—	—	—	—	2.3	—	—	—	—	1.0	2.3	4.0	0.50	0.66	1.50	2.22	2.93	5.8	3.48	A
	9	—	—	—	—	2.9	—	—	—	—	1.0	2.9	4.1	0.50	0.86	1.40	2.22	3.82	6.0	3.37	A
	12	—	—	—	—	3.8	—	—	—	—	1.0	3.8	4.1	0.50	1.16	1.50	2.22	5.15	6.7	3.28	A
	18	—	—	—	—	5.5	—	—	—	—	1.5	5.5	6.0	0.55	1.66	2.60	2.44	7.36	8.4	3.31	A
	24	—	—	—	—	7.0	—	—	—	—	1.5	7.0	8.6	0.55	2.06	2.60	2.44	9.14	8.9	3.40	A
BI (1x2)	7	18	—	—	—	2.30	5.50	—	—	—	1.2	7.8	7.8	0.50	2.20	4.00	2.15	9.76	19.0	3.55	B
	7	24	—	—	—	2.30	7.00	—	—	—	1.2	9.3	9.3	0.50	2.80	4.00	2.15	12.42	19.0	3.32	C
	9	18	—	—	—	2.90	5.50	—	—	—	1.2	8.4	8.4	0.50	2.40	4.00	2.15	10.65	19.0	3.50	B
	9	24	—	—	—	2.90	7.00	—	—	—	1.2	9.9	9.9	0.50	2.70	4.00	2.15	11.98	19.0	3.67	A
	12	18	—	—	—	4.37	6.33	—	—	—	1.2	10.7	9.3	0.50	2.90	4.00	2.15	12.87	19.0	3.69	A
	12	24	—	—	—	3.76	6.94	—	—	—	1.2	10.7	10.8	0.50	2.90	4.00	2.15	12.87	19.0	3.69	A
	18	18	—	—	—	5.35	5.35	—	—	—	1.2	10.7	11.0	0.50	2.90	4.00	2.15	12.87	19.0	3.69	A
	18	24	—	—	—	4.71	5.99	—	—	—	1.2	10.7	11.5	0.50	2.90	4.00	2.15	12.87	19.0	3.69	A
	24	24				5.35	5.35				1.2	10.7	11.5	0.50	3.00	4.00	2.44	13.31	19.0	3.57	B
TRI (1x3	7	7	12	—	—	2.30	2.30	3.80	—	—	1.5	8.4	8.4	0.55	2.51	4.00	2.50	11.14	19.0	3.35	C
	7	7	18	—	—	2.30	2.30	5.50	—	—	1.5	10.1	10.1	0.55	2.76	4.0	2.5	12.24	19.0	3.66	A
	7	7	24	—	—	2.12	2.12	6.46	—	—	1.5	10.7	11.5	0.55	2.96	4.0	2.5	13.13	19.0	3.61	A
	7	9	9	—	—	2.30	2.90	2.90	—	—	1.5	8.1	8.1	0.55	2.51	4.0	2.5	11.14	19.0	3.23	C
	7	9	12	—	—	2.30	2.90	3.80	—	—	1.5	9.0	9.0	0.55	2.51	4.0	2.5	11.14	19.0	3.59	B
	7	9	18	—	—	2.30	2.90	5.50	—	—	1.5	10.7	10.7	0.55	2.96	4.0	2.5	13.13	19.0	3.61	A
	7	9	24	—	—	2.02	2.54	6.14	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	7	12	12	—	—	2.30	3.80	3.80	—	—	1.5	9.9	9.9	0.55	2.71	4.0	2.5	12.02	19.0	3.65	A
	7	12	18	—	—	2.12	3.51	5.07	—	—	1.5	10.7	11.5	0.55	3.11	4.0	2.5	13.80	19.0	3.44	B
	7	12	24	—	—	1.88	3.10	5.72	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	9	9	9	—	—	2.90	2.90	2.90	—	—	1.5	8.7	8.7	0.55	2.56	4.0	2.5	11.36	19.0	3.40	C
	9	9	12	—	—	2.90	2.90	3.80	—	—	1.5	9.6	9.6	0.55	2.61	4.0	2.5	11.58	19.0	3.68	A
	9	9	18	—	—	2.75	2.75	5.21	—	—	1.5	10.7	11.0	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	9	9	24	—	—	2.42	2.42	5.85	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	9	12	12	—	—	2.90	3.80	3.80	—	—	1.5	10.5	10.5	0.55	3.01	4.0	2.5	13.35	19.0	3.49	B
	9	12	18	—	—	2.54	3.33	4.82	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	9	12	24	—	—	2.26	2.97	5.47	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	12	12	12	—	—	3.57	3.57	3.57	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	12	12	18	—	—	3.10	3.10	4.49	—	—	1.5	10.7	11.5	0.55	3.01	4.0	2.5	13.35	19.0	3.55	B
	12	12	24			2.78	2.78	5.13			1.8	10.7	11.5	0.55	3.10	4.0	2.5	13.75	19.0	3.45	B
	12	18	18			2.75	3.98	3.98			1.8	10.7	11.5	0.55	3.10	4.0	2.5	13.75	19.0	3.45	B

	18	18	18			3.57	3.57	3.57			1.8	10.7	11.5	0.55	3.15	4.0	2.5	13.98	19.0	3.40	C
QUADRI (1x4)	7	7	7	7	—	2.30	2.30	2.30	2.30	—	1.8	9.2	9.2	0.55	2.87	4.0	2.5	12.73	19.0	3.21	C
	7	7	7	9	—	2.30	2.30	2.30	2.90	—	1.8	9.8	9.8	0.55	2.87	4.0	2.5	12.73	19.0	3.41	B
	7	7	7	12	—	2.30	2.30	2.30	3.80	—	1.8	10.7	10.7	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	7	18	—	1.98	1.98	1.98	4.75	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	7	24	—	1.77	1.77	1.77	5.39	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	9	9	—	2.30	2.30	2.90	2.90	—	1.8	10.4	10.4	0.55	2.87	4.0	2.5	12.73	19.0	3.62	A
	7	7	9	12	—	2.18	2.18	2.75	3.60	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	9	18	—	1.89	1.89	2.39	4.53	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	9	24	—	1.70	1.70	2.14	5.17	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	12	12	—	2.02	2.02	3.33	3.33	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	12	18	—	1.77	1.77	2.93	4.23	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	9	9	9	—	2.24	2.82	2.82	2.82	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	9	9	12	—	2.07	2.61	2.61	3.42	—	1.8	10.7	11.5	0.55	2.90	4.0	2.5	12.87	19.0	3.69	A
	7	9	9	18	—	1.81	2.28	2.28	4.33	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	9	12	12	—	1.92	2.42	3.18	3.18	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	12	12	12	—	1.80	2.97	2.97	2.97	—	1.8	10.7	11.5	0.55	2.88	4.0	2.5	12.78	19.0	3.71	A
	9	9	9	9	—	2.68	2.68	2.68	2.68	—	1.8	10.7	11.5	0.55	2.92	4.0	2.5	12.95	19.0	3.66	A
	9	9	9	12	—	2.48	2.48	2.48	3.25	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	9	9	9	18	—	2.19	2.19	2.19	4.14	—	1.8	10.7	11.5	0.55	2.85	4.0	2.5	12.64	19.0	3.75	A
	9	9	12	12	—	2.32	2.32	3.03	3.03	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	9	12	12	12	—	2.17	2.84	2.84	2.84	—	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	12	12	12	12		2.68	2.68	2.68	2.68		1.8	10.7	11.5	0.55	2.91	4.0	2.5	12.91	19.0	3.68	A
(1×5)	7	7	7	7	7	2.14	2.14	2.14	2.14	2.14	1.8	10.7	11.5	0.55	2.92	4.0	2.5	12.95	19.0	3.66	A
	7	7	7	7	9	2.03	2.03	2.03	2.03	2.56	1.8	10.7	11.5	0.55	2.91	4.0	2.5	12.91	19.0	3.68	A
	7	7	7	7	12	1.89	1.89	1.89	1.89	3.13	1.8	10.7	11.5	0.55	2.90	4.0	2.5	12.87	19.0	3.69	A
	7	7	7	9	9	1.94	1.94	1.94	2.44	2.44	1.8	10.7	11.5	0.55	2.90	4.0	2.5	12.87	19.0	3.69	A
	7	7	7	9	12	1.81	1.81	1.81	2.28	2.99	1.8	10.7	11.5	0.55	2.89	4.0	2.5	12.82	19.0	3.70	A
	7	7	7	12	12	1.70	1.70	1.70	2.80	2.80	1.8	10.7	11.5	0.55	2.90	4.0	2.5	12.87	19.0	3.69	A
	7	7	9	9	9	1.85	1.85	2.33	2.33	2.33	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	7	7	9	9	12	1.73	1.73	2.19	2.19	2.86	1.8	10.7	11.5	0.55	2.91	4.0	2.5	12.91	19.0	3.68	A
	7	9	9	9	9	1.77	2.23	2.23	2.23	2.23	1.8	10.7	11.5	0.55	2.92	4.0	2.5	12.95	19.0	3.66	A
	9	9	9	9	9	2.14	2.14	2.14	2.14	2.14	1.8	10.7	11.5	0.55	2.87	4.0	2.5	12.73	19.0	3.73	A
	9	9	9	9	12	2.01	2.01	2.01	2.01	2.64	1.8	10.7	11.5	0.55	2.92	4.0	2.5	12.95	19.0	3.66	A
	9	9	9	12	12	1.90	1.90	1.90	2.49	2.49	1.8	10.7	11.5	0.55	3.26	4.0	2.5	14.46	19.0	3.28	C

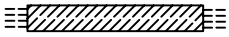
4.2. Wiring connection

YJU3YH019BARRA-X





Power Supply Cable:
H05RN-F3G 4.0mm2

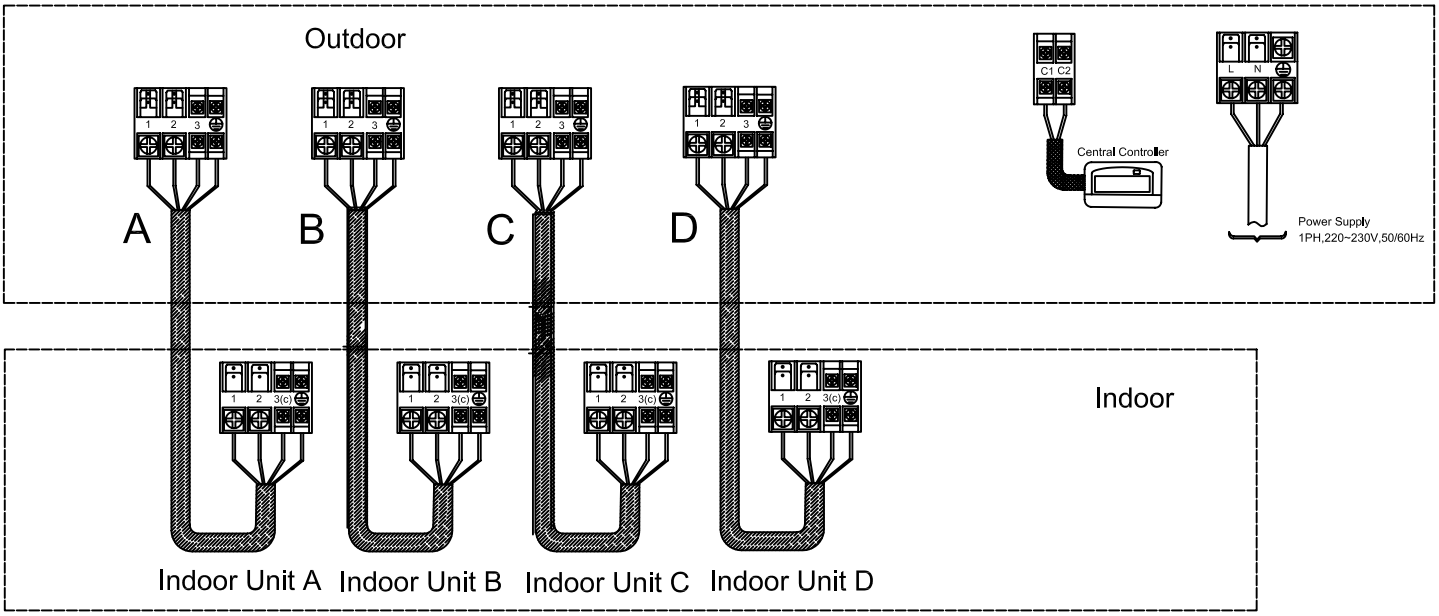


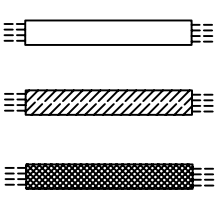
Connecting Cable:
H05RN-F4G 2.5mm2

Connecting Cable:
H05RN-F2G 2.5mm2

If this outdoor unit connects with AS*S1ERA, the connecting cable is 1.5mm2

Connect the connecting wires between indoor and outdoor units and ensure the sequence numbers on terminals match with each other.



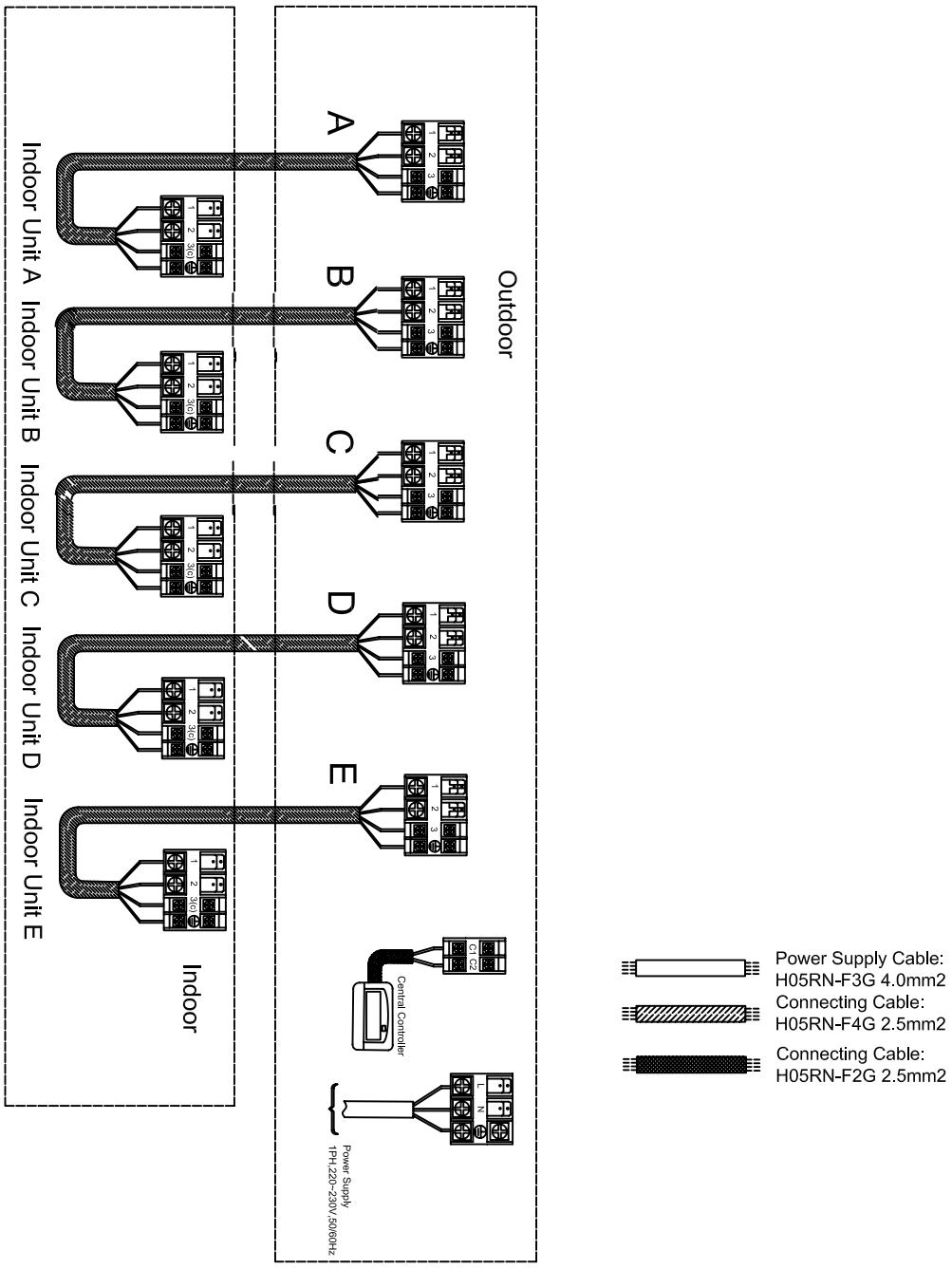


Power Supply Cable:
H05RN-F3G 4.0mm2
Connecting Cable:
H05RN-F4G 2.5mm2
Connecting Cable:
H05RN-F2G 2.5mm2

If this outdoor unit connects with AS*S1ERA, the connecting cable is 1.5mm2

Connect the connecting wires between indoor and outdoor units and ensure the sequence numbers on terminals match with each other.

YJU5YH034BARRA-X

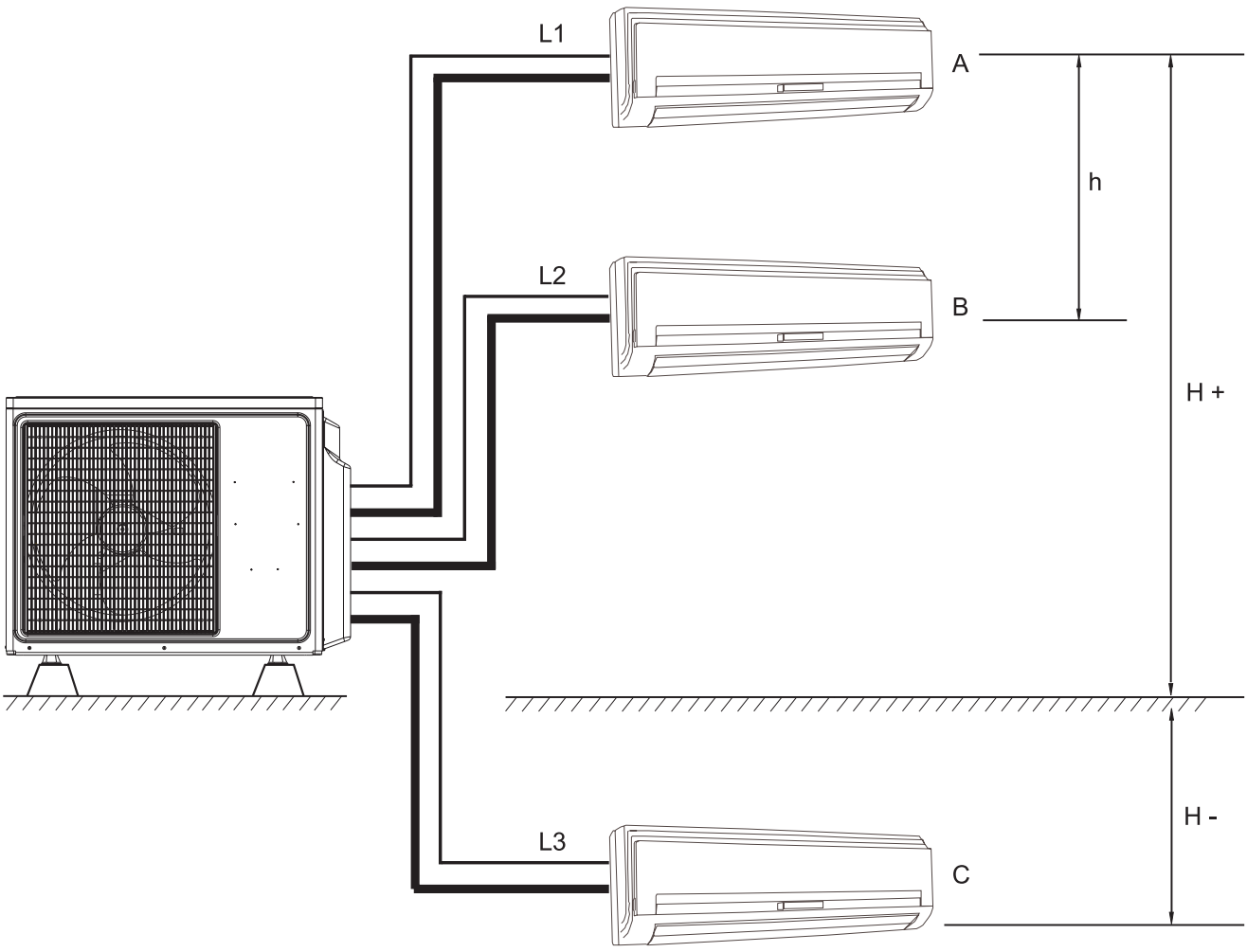


If this outdoor unit connects with AS*S1ERA, the connecting cable is 1.5mm2

Connect the connecting wires between indoor and outdoor units and ensure the sequence numbers on terminals match with each other.

4.3 Limitation values on pipe installation

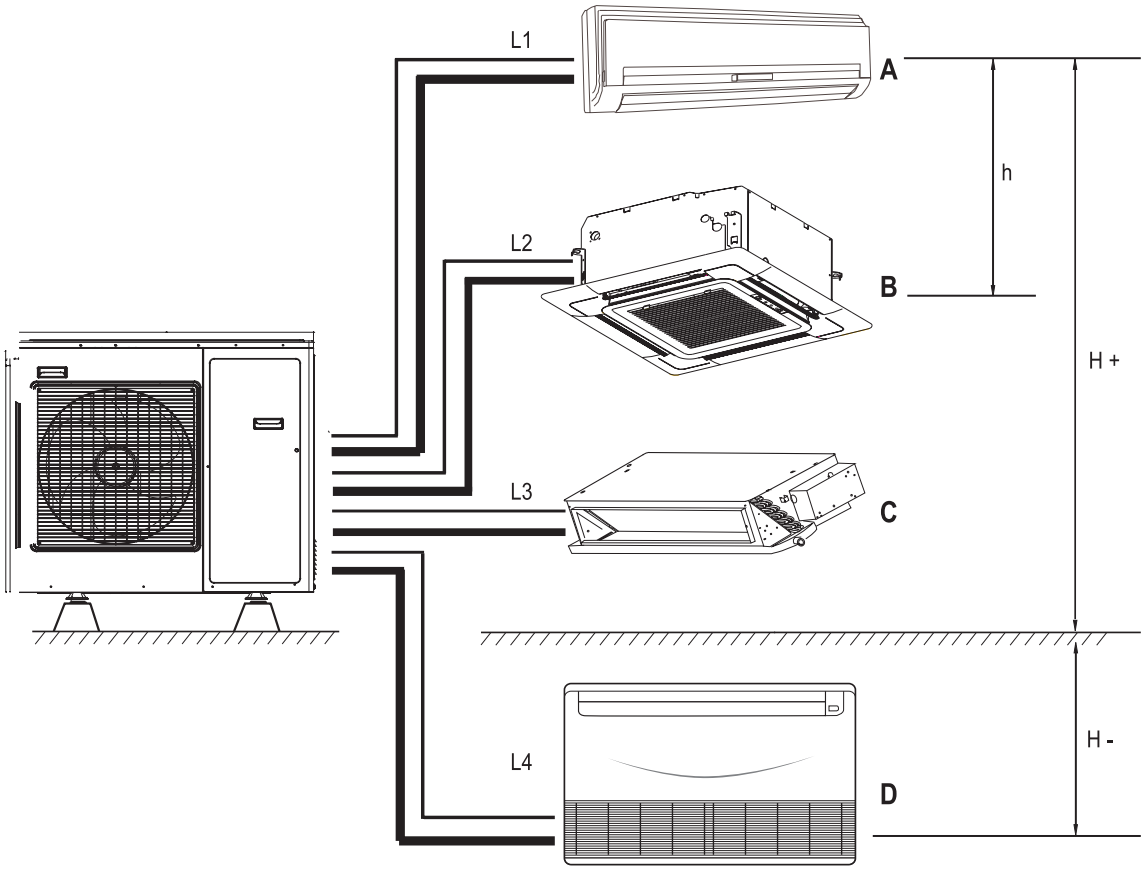
YJU3YH019BARRA-X



The piping length information, please refer the following table.

Item	Unit	Description	Standard	Maximum
A,B,C liquid pipe	mm	Size of the liquid side connection pipe	φ6.35	/
A,B,C Gas pipe	mm	Size of the gas side connection pipe	φ9.52	/
L1 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L2 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L3 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L1+L2+L3	m	Total liquid piping length	≤30	≤50
h	m	Drop between every two indoor units when the location of the outdoor unit is among indoor units	≤1	≤15
	m	Drop between every two indoor units when the location of the outdoor unit is at one side of indoor units	≤1	≤7.5
H+	m	Drop between the outdoor unit and the indoor unit	≤5	≤15
H-	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is among the indoor units	≤5	≤7.5
	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is at one side of indoor units	≤5	≤15

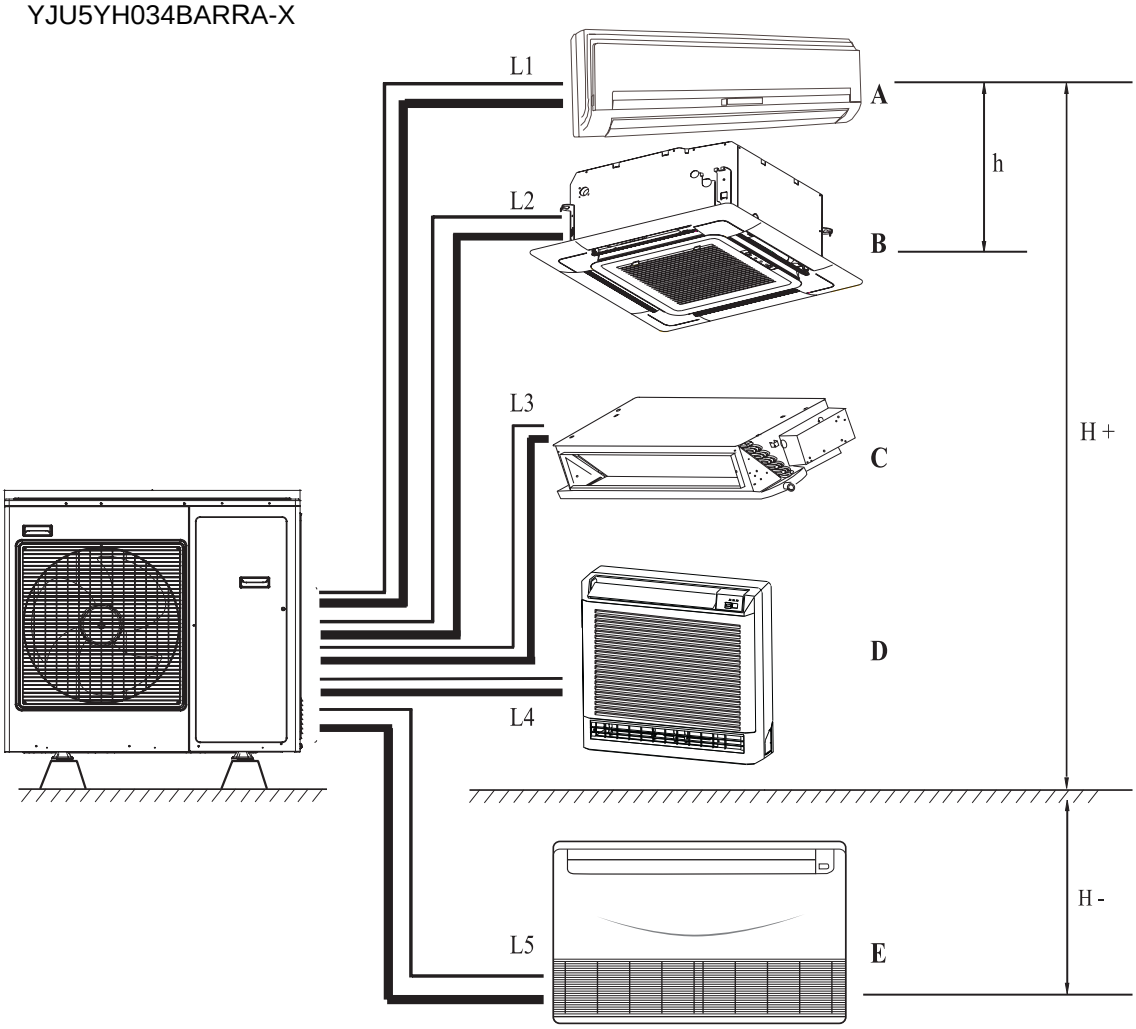
YJU4YH025/30BARRA-X



The piping length information, please refer the following table.

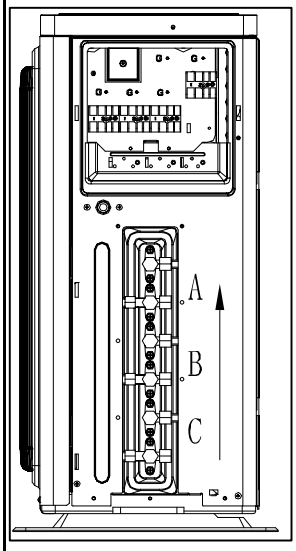
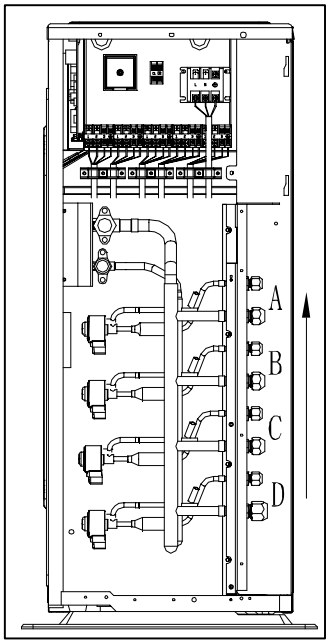
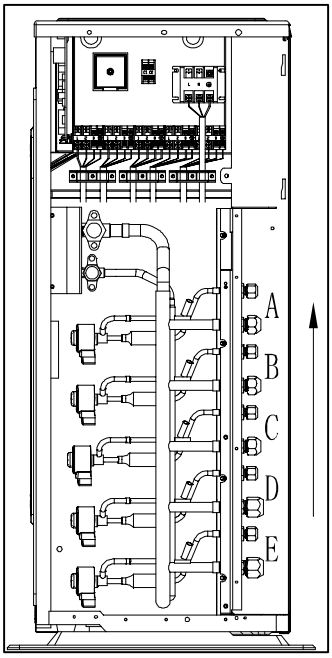
Item	Unit	Description	Standard	Maximum
A,B,C, Dliquid pipe	mm	Size of the liquid side connection pipe	φ6.35	/
A,B,C Gas pipe	mm	Size of the gas side connection pipe	φ9.52	/
D Gas pi[pe	mm	Size of the gas side connection pipe	φ12.7	/
L1 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L2 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L3 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L4 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L1+L2+L3+L4	m	Total liquid piping length	≤40	≤70
h	m	Drop between every two indoor units when the location of the outdoor unit is among indoor units	≤1	≤15
	m	Drop between every two indoor units when the location of the outdoor unit is at one side of indoor units	≤1	≤7.5
H+	m	Drop between the outdoor unit and the indoor unit	≤5	≤15
H-	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is among the indoor units	≤5	≤7.5
	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is at one side of indoor units	≤5	≤15

YJU5YH034BARRA-X

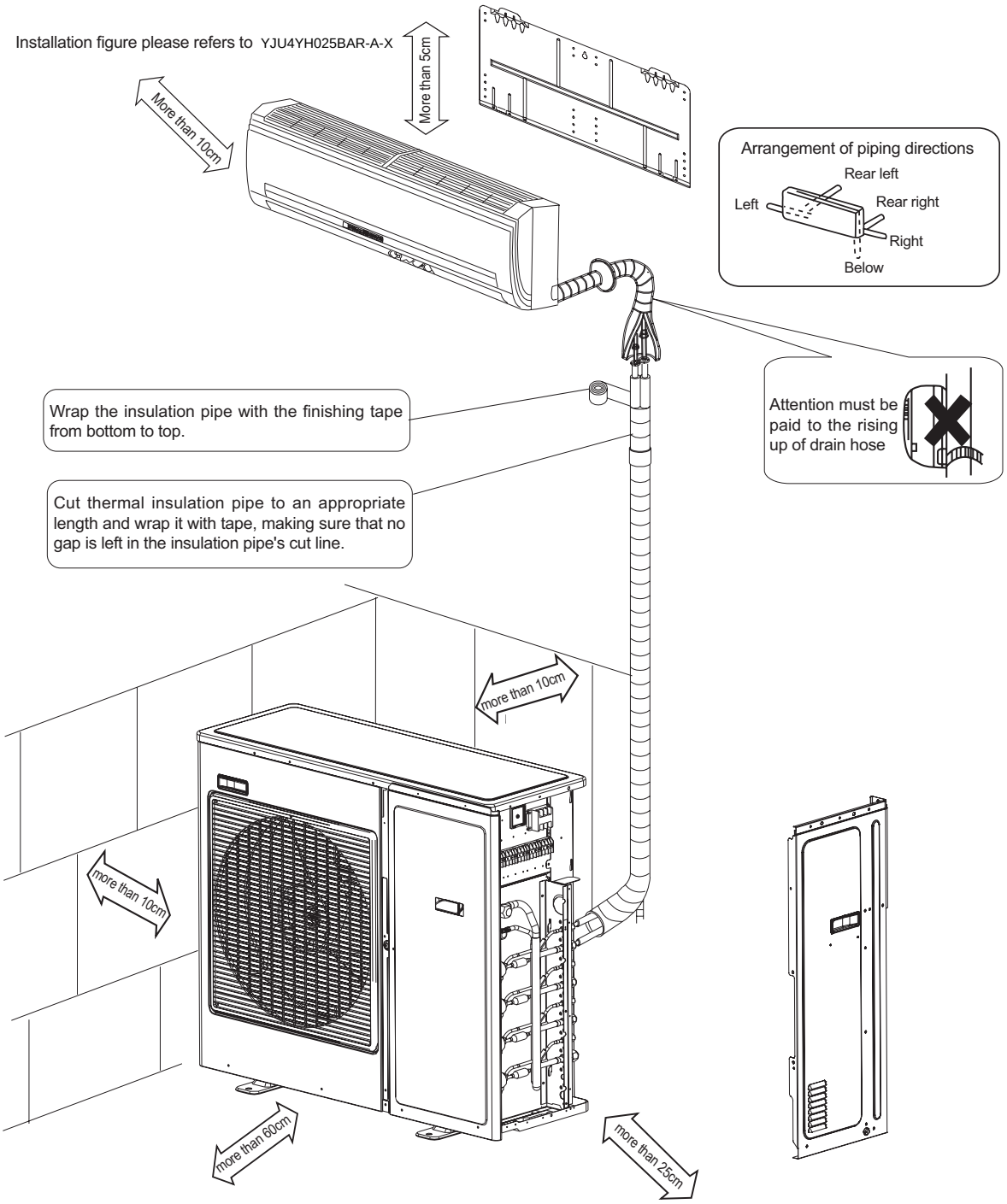


The piping length information, please refer the following table.

Item	Unit	Description	Standard	Maximum
A,B,C,D,E liquid pipe	mm	Size of the liquid side connection pipe	φ6.35	/
A,B,C,D Gas pipe	mm	Size of the gas side connection pipe	φ9.52	/
E Gas pi[pe	mm	Size of the gas side connection pipe	φ12.7	/
L1 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L2 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L3 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L4 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L5 (one way)	m	Max.piping length between IU and OU of the way	≤10	≤25
L1+L2+L3+L4+L5	m	Total liquid piping length	≤40	≤80
h	m	Drop between every two indoor units when the location of the outdoor unit is among indoor units	≤1	≤15
	m	Drop between every two indoor units when the location of the outdoor unit is at one side of indoor units	≤1	≤7.5
H+	m	Drop between the outdoor unit and the indoor unit	≤5	≤15
H-	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is among the indoor units	≤5	≤7.5
	m	Drop between the outdoor unit and the indoor unit when the location of outdoor unit is at one side of indoor units	≤5	≤15

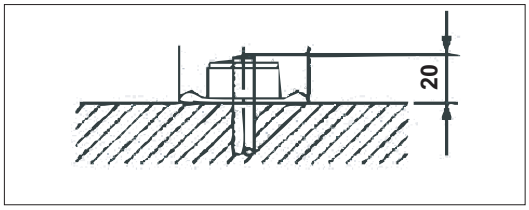
Connection cautions			
model	YJU3YH019BARRA-X	YJU4YH025/30BARRA-X	YJU5YH034BARRA-X
connection priority between indoor and stop valve higher from down to up			
when there is 1 indoor,the prior stop valve is	C	D	E
when there are 2 indoors,the prior stop valves are	C、B	D、C	E、D
when there are 3 indoors,the prior stop valves are	C、B、A	D、C、B	E、D、C
when there are 4 indoors,the prior stop valves are		D、C、B、A	E、D、C、B
when there are 5 indoors,the prior stop valves are			E、D、C、B、A
Note: For better oil return and more reliable system, please execute as the above when connecting indoor unit.			

4.4 Outdoor installation



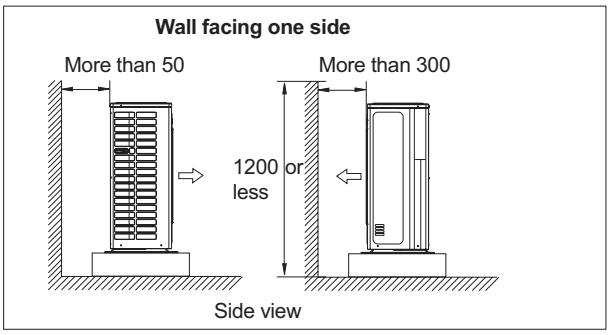
If there is the danger of the unit falling or overturning, fix the unit with foundation bolts, or with wire or other means.
If the location does not have good drainage, place the unit on a level mounting base(or a plastic pedestal).
Install the outdoor unit in a level position. Failure to do so may result in water leakage or accumulation.

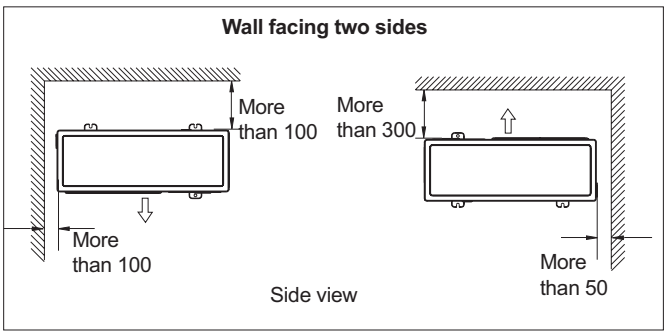
- Check the strength and level of the installation ground so that the unit will not cause any operating vibration or noise after installed.
- In accordance with the foundation drawing in fix the unit securely by means of the foundation bolts.(Prepare four sets of M8 or M10 foundation bolts, nuts and washers each which are available on the market.)
- It is best to screw in the foundation bolts until their length are 20mm from the foundation surface.

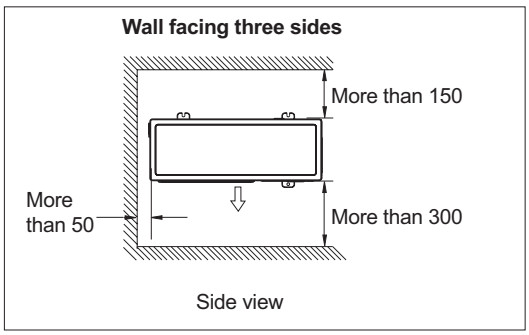


Outdoor Unit Installation Guideline

- Where a wall or other obstacle is in the path of outdoor unit's intake or exhaust airflow, follow the installation guidelines below.
- For any of the below installation pattems, the wall height on the exhaust side should be 1200mm or less.







Limitations on the installation

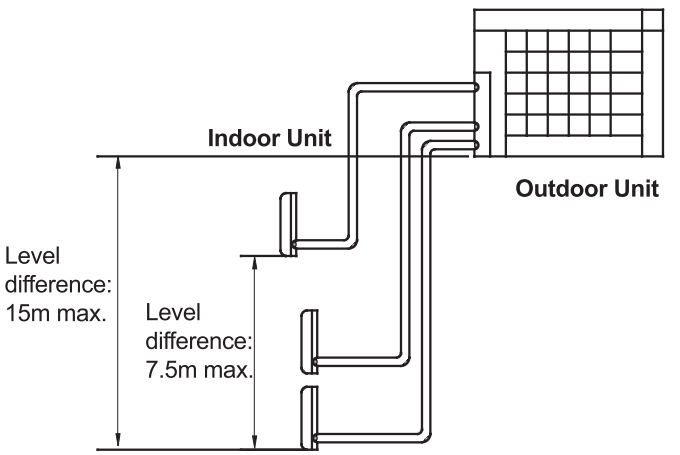
1.Precautions on installation

- Check the strength and level of the installation ground so that unit will not cause any operating vibration or noise after installation.
- In accordance with the foundation drawing in fix the unit securely by means of the foundation bolts.
- It is best to screw in the foundation bolts unit their length are 20 mm from the foundation surface.

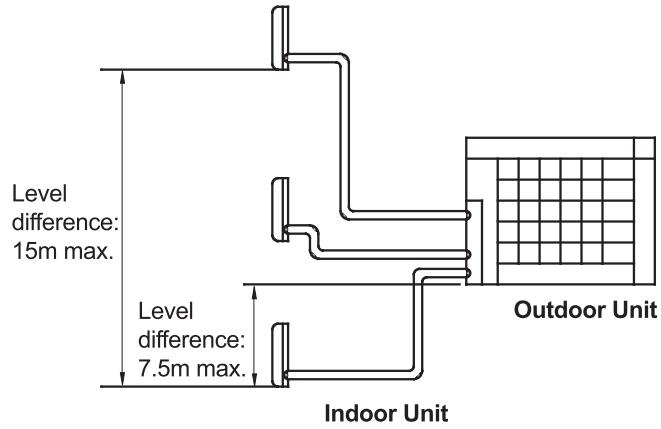
2.Selecting a location for installation of the indoor units

- The maxinum allowable length of refrigerant piping, and the maxmum allowable height difference between the outdoor and indoor units, are listed below. (The shorter the refrigerant piping, the better the performance. Connect so that the piping is as short as possible. Shortest allowable length per room is 3m)

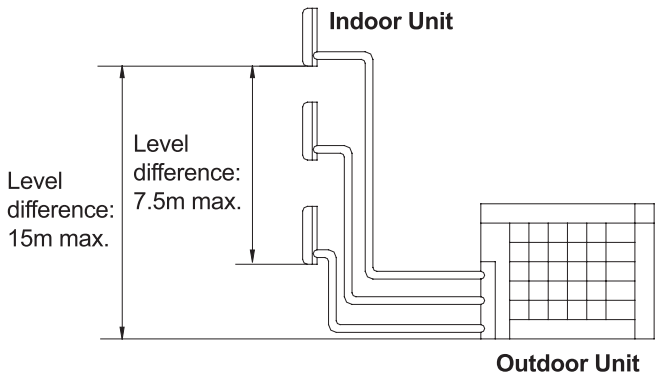
Outdoor unit capacity class	3U19FS1ERA	4U25HS1ERA 4U30HS1ERA	5U34HS1ERA
Piping to each indoor unit	25m max.	25m max.	25m max.
Total length of piping between al lunits	50m max.	70m max.	80m max.



If the outdoor unit is positioned higher than the indoor units.



If the outdoor unit is positioned higher than the indoor units.
(If lower than one or more indoor units.)



If the Indoor unit is positioned higher than the outdoor units.

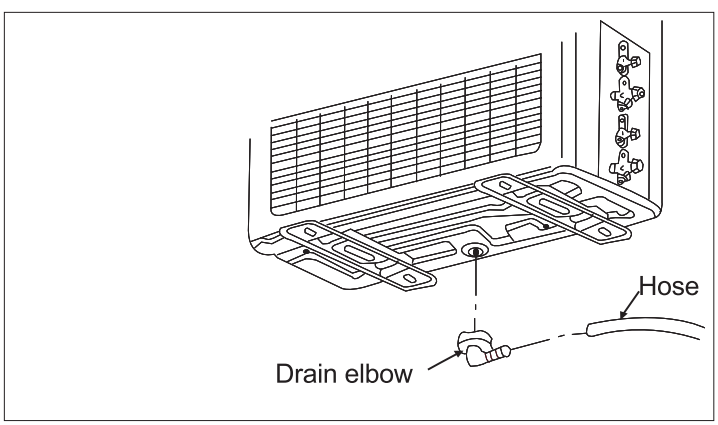
Refrigerant piping work

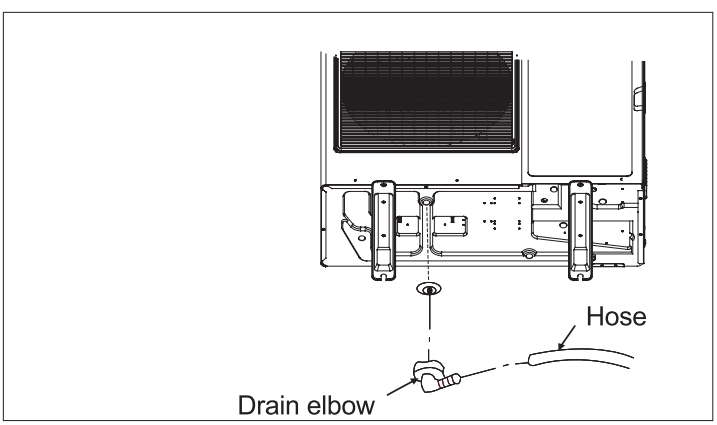
1. Installing outdoor unit

1) When installing the outdoor unit, refer to "Precautions for Selecting the Location" and the "Indoor/Outdoor Unit Installation Drawings".
2)If drain work is necessary, follow the procedures below.

2. Drain work

1) Use drain plug for drainage.
2) If the drain port is covered by a mounting base or floor surface, place additional foot bases of at least 30mm in height under the outdoor unit's feet.
3) In cold areas, do not use a drain hose with the outdoor unit.(Otherwise, drain water may freeze, impairing heating performance.)

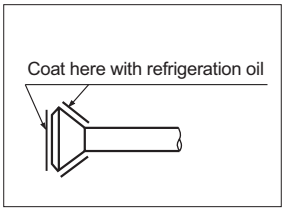


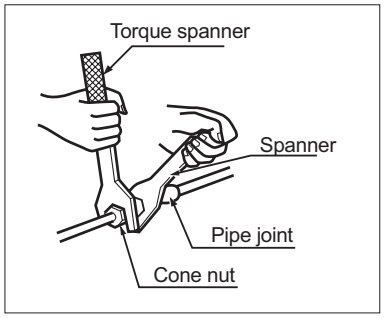


3. Refrigerant piping work

1）. Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the tor wrenches.
Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and escaping gas.

Flare nut fightening torque	
Flare nut for ∅ 6.35	14.2-17.2N.m(144-175kgf.cm)
Flare nut for ∅ 9.52	32.7-39.9N.m(333-407kgf.cm)
Flare nut for ∅ 12.7	49.5-60.3N.m(505-615kgf.cm)
Flare nut for ∅ 15.88	61.8-75.4N.m(630-769kgf.cm)





Valve cap tightening torque
Liquid pipe 26.5-32.3N.m(270-330kgf.cm)
Gas pipe 48.1-59.7N.m(490-610kgf.cm)

Service port cap tightening torque
10.8-14.7N.m(110-150kgf.cm)

2)To prevent gas leakage, apply refrigeration oil on both inner and outer surfaces of the flare. (Use refrigeration oil for R410A)

4. Purging air and checking gas leakage

When piping work is completed, it is necessary to purge the air and check for gas leakage.

⚠ WARNING

1) Do not mix any substance other than the specified refrigerant (R410A) into the refrigeration cycle.
2) When refrigerant gas leaks occur, ventilate the room as soon and as much as possible.
3) R410A, as well as other refrigerants, should always be recovered and never be released directly into the environment.
4) Use a vacuum pump for R410A exclusively. Using the same vacuum pump for different refrigerents may damage the vacuun pump or the unit.

- If using additional refrigerant, perform air purging from the refrigerant pipes and indoor unit using a vacuum pump, then charge additional refrigerant.
- Use a hexagonal wrench (4mm) to operate the stop valve rod.
- All refrigerant pipe joints should be tightened with a torque wrench at the specified tightening torque.

Connect projection side of charging hose(Which comes from gauge manifold) to gas stop valve's service port.

⇩

Fully open gauge manifold's low-pressure valve(Lo) and completely close its high-pressure valve(Hi).
(High-pressure valve subsequently requires no operation.)

⇩

Apply vacuum pumping. Check that the compound pressure gauge reads-0.1MPa(-76cmHg).
Evacuation for at lease 1 hour is recommended.

⇩

Close gauge manifold's low-pressure valve(Lo) and stop vacuum pump.
(Leave as is for 4-5 minutes and make sure the coupling meter needie does not go back.
If it does go back, this may indicate the presence of moisture or leaking from connecting parts. After inspecting all the connection and loosening then retightening thenuts, reqeat steps 2-4.)

⇩

Remove covers from liquid stop valve and gas stop valve.

⇩

Turn the liquid stop valve's rod 90 degrees counterclockwise with a hexagonal wrench to open valve.
Close it after 5 seconds, and check for gas leakage.
Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods.
After the check is complete, wipe all soapy water off.

⇩

Disconnect charging hose from gas stop valve's service port, then fully open liquid and gas stop valves.
(Do not attempt to turn valve rodj beyond its stop.)

⇩

Tighten valve caps and service port caps for the liquid and gas stop valves with a torque wrench at the specified torques. See "3 Refrigerant piping " on page 6 for details.

5. Refilling the refrigerant

Check the type of refrigerant to be used on the machine namiplate.

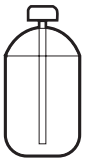
Precautions when adding R410A

Fill from the liquid pipe in liquid form.

It is a mixed refrigerant, so adding it in gas form may cause the refrigerant composition to change, preventing normal operation.

1) Before filling, check whether the cylinder has a siphon attached or not.(It should have something like "liquid filling siphon attached" displayed on it.)

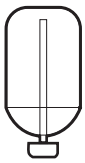
Filling a cylinder with an attached siphon



Stand the cylinder upright when filling.

There is a siphon pipe inside, so the cylinder need not be upside-down to fill with liquid.

Filling other cylinders



Turn the cylinder upside-down when filing.

2) Be sure to use the R410A tools to ensure pressure and to prevent foreign objects entering.

6. Charging with refrigerant

1) This system must use refrigersant R410A.
2) Add refrigerant 20g per meter when the total piping length exceeds the standard value, but make sure that the total liquid piping length should be less than the max. value.

Outdoor Unit	Standard total liquid piping length	Max. total liquid piping length
YJU3YH019BARRA-X	30m	50m
YJU4YH025BARRA-X	40m	70m
YJU4YH030BARRA-X	40m	70m
YJU5YH034BARRA-X	40m	80m

Notes:

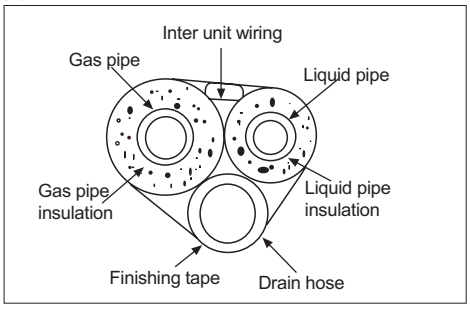
1) When using this product, you need not to set the address. But the L/N wires between indoor & outdoor units must be corresponded, or there will be communication failure.
2) Quiet Operation Setting. Set the DIP "8" to ON position of SW5, the system will run with lower noise, but the max. capacity will also reduce slightly.
3) Do not change the settings of other switchs, wrong settings can make the system damage or other malfunctions.

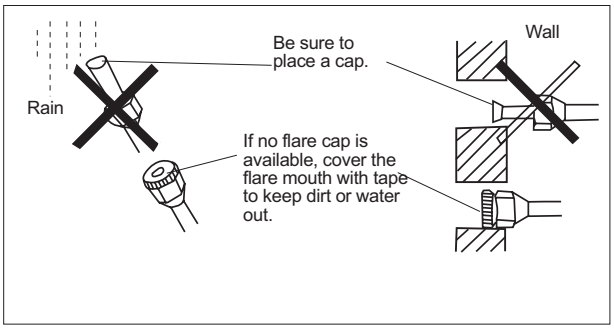
7.Precautions for Laying Refrigerant Piping

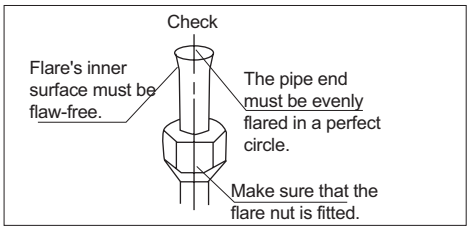
- **Cautions on pipe handling**
  1) Protect the open end of the pipe against dust and moisture.
  2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.(Bending radius should be 30 to 40mm or larger.)
- **Selection of copper and heat insulation materials**
  When using commercial copper pipes and fittings, observe the following :
  1) Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK(0.035to 0.045kcal/mh°C)
  Refrigerant gas pipe's surface temperature reaches 110°C max.
  Choose heat insulation materials that will withstand this temperature.
  2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

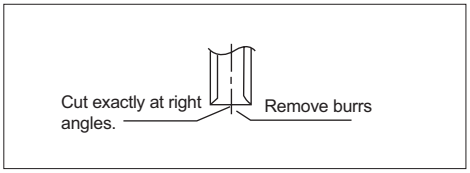
Gas pipe	Gas pipe insulation
O.D.:9.52mm,12.7mm Thickness:0.8mm	I.D.:12-15mm,12.7mm Thickness:13mm min.
Liquid pipe	Liquid pipe insulation
O.D.:6.35mm Thickness:0.8mm	I.D.:18-10mm Thickness:10mm min.

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipe.

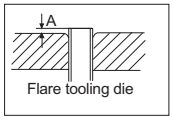








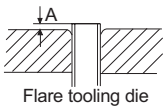
Set exactly at the position shown below.



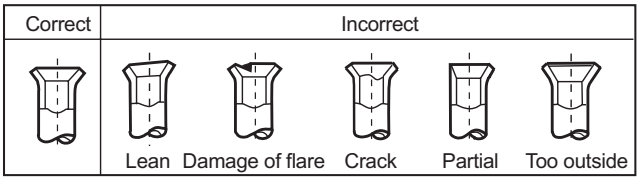
	Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type(Rigid-type)	Wing-nuttype(Imperial-type)
A	0-0.5mm	1.0-1.5mm	1.5-2.0mm

8.Cutting and Flaring work of piping

- Pipe cutting is carried out with a pipe cutter and burs must be removed.
- After inserting the flare nut, flaring work is carried out.

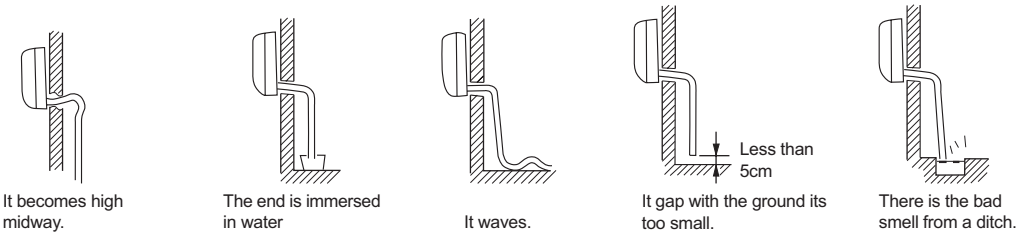


Pipe	Pipe diameter φ	Size A (mm)
Liquid side	6.35mm(1/4")	0.8~1.5
Gas side	9.52mm(3/8")	1.0~1.5
	12.7mm(1/2")	1.0~1.5



9. On drainage

- Please install the drain hose so as to be downward slope without fail. Please don't do the drainage as shown below.



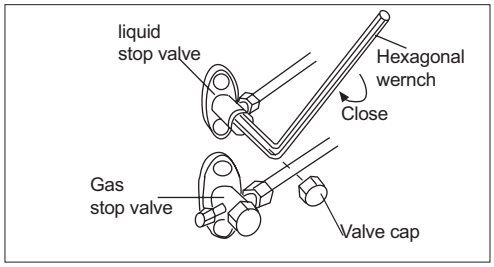
- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out serely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

⚠ WARNING

1) Do not use mineral oil on flared part.
2) Prevent mineral oil from getting into the system as this would educe the lifetime of the units.
3) Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
4) Do never install a drier to this R410A unit in order to guarantee its lifetime.
5) The drying material may dissolve and damage the system.
6) Incom;ete flaring may cause refrigerant gas leakage.

In order to protect the environment, be sure to pump down when relocating or disposing of the unit.

1) Remove the valve caps from liquid stop valve and gas stop valve.
2) Carry out forced cooling operation.
3) After five to ten minutes, close the liquid stop valve with a hexagonal wrench.
4) After two to three minutes, close the gas stop vaile and stop forced cooling operation.

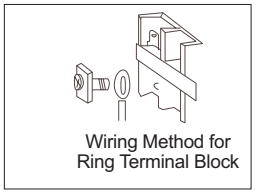


1. Electric wiring

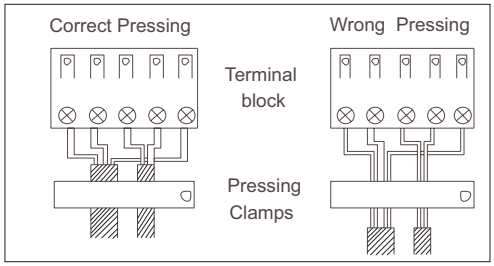
- The air conditioner must use special circuit , and wiring by the qualified electrician according to the wiring rules specified in national standard.
- The grounding wire and the neutral wire shall be strictly separated. Connect the neutral wire with grounding wire is incorrect.
- The electric leakage breaker must be installed.
- All the electric wire must be copper wire.Power supply: 1PH, 220-230V~, 50/60Hz.
- The wiring method of power line is Y connection. If the power line is damaged, in order to avoid risk of electric shock, it must be replaced by the manufacturer or its repair center or other similar qualified person.The connecting cable must be shielded.
  Fuse: T3.15A 250VAC T16A 250VAC (Please check with the outdoor unit wiring diagram.)
- Please check the circuit diagram about the fuse replaced.

2. Wiring method

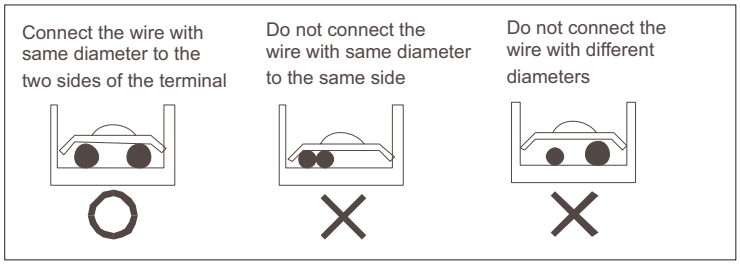
- Wiring method of orbicular terminals
  For the connection wire with orbicular terminals, its wiring method is as shown in the right figure: remove the connecting screw, put the screw through the ring on the end of the wire, then connect to the terminal block and fasten screw.
  Wiring method of straight terminals .



- For the connection wire without orbicular terminals, its wiring method is: loosen the connection screw, and insert the end of the connection wire completely into the Terminal block, then fasten the screw.
  Slightly pull the wire outwards to confirm it is firmly held.



- Crimp connection method for wires without terminals

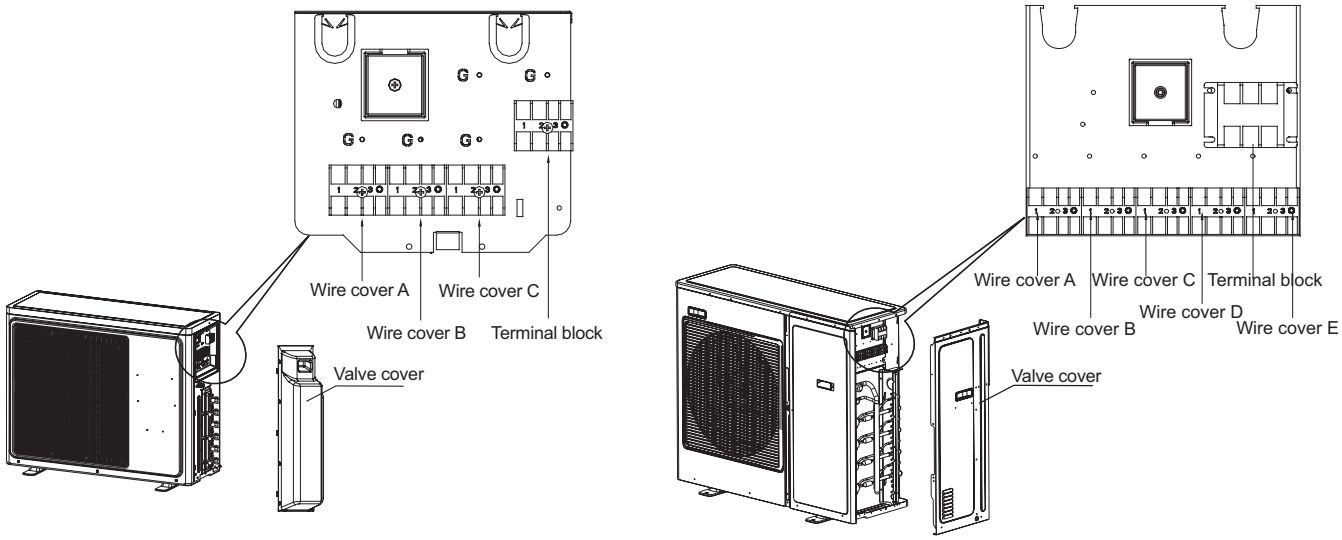


- Crimp connection method for connection wire
  After connection,the wire must be fastened by wire cover. The wire cover shall press on the protection coat of the connection wire,as shown in right top figure.
  Note:When connecting the wiring,confirm the terminal number of indoor and outdoor units carefully.
  Incorrect wiring will damage the controller of air conditioner or the unit can not operate.

3. Wiring method of outdoor unit:

- Power line
  Remove the repair board of the outdoor unit and loosen the wire cover A,then put the live wire, neutral wire and grounding wire through the wire cover ,and connect them to terminal block correspon dingly. After connection, fasten wire cover to its previous state.
  Communication wire of indoor unit.
- Loosen wire cover , put the communication wire through the wire cover B, and connect them to terminal block correspondingly. After connection, fasten wire cover B to its previous state.

Note: Power line and communication wire are provided by consumers themselves.



4. Wiring method of indoor unit

Loosen wire cover and connect the power line and communication wire of indoor unit to the terminal correspondingly.

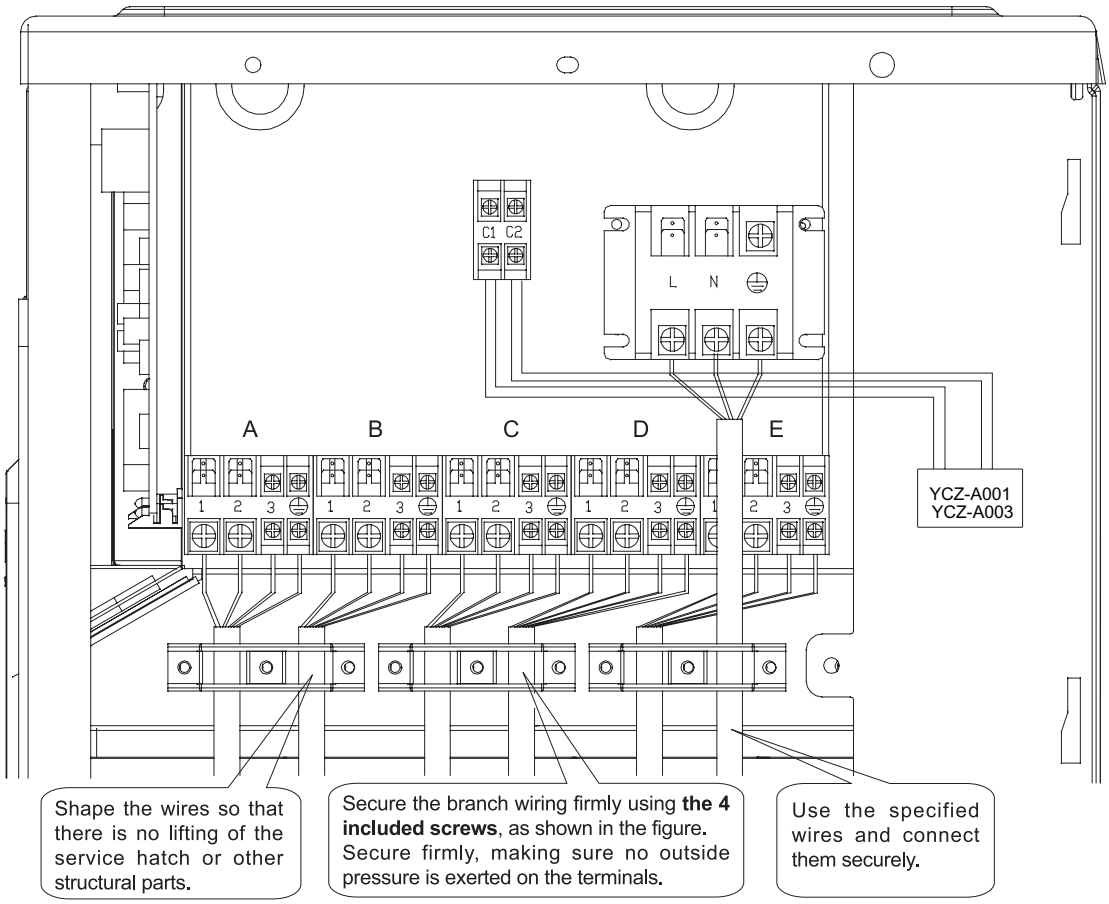
Note:

When connecting power line to power supply terminal, please pay attention to the following items:

- Do not connect the power line with different dimensions to the same connection wire end. Improper contact will cause heat generation.
- Do not connect the power line with different dimensions to the same grounding wire end. Improper contact will affect protection.
- Do not connect the power line to the connecting end of communication wire. Incorrect connection will cause damage to the connected unit.

5. Example wiring diagram.

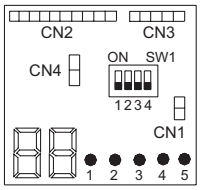
Wiring diagram please refers to YJU4YH025BARRA-X



- Before starting the test running, please confirm the following works have been done successfully.
  1) Correct piping work;
  2) Correct wiring work;
  3) Correct match of indoor and outdoor unit;
  4) Proper recharge of refrigerant if needed.
- Make sure that all the stop valves are fully open.
- Check the voltage supplied to the outdoor and indoor units, please cinfirm that is 230V.

- Wiring Error Check

This product is capable of automatic checking of wiring error.



Switch on all the 4 dip-switches on the outdoor unit small service PC-board as shown on the right. Then power off the unit and power on again, the system will enter the operation of "Wiring Error Check". After 3 minutes stand-by, the unit starts for automatic wiring checking.
Approximately 30 ~ 50minutes (depends on how many units installed in the system) after the unit starts, the Errors of the wiring will be shown by the LEDs (1 to 5).

During this operation, the digital-number will alternately show the compressor working frequency (e.g. 50 stands for the current running frequency) and letter "CH"(means checking).
After this operation, if all the wiring is correct, the digital-number will show "0", if there has wrong wiring, the digital-number will show "EC"(error connection) and also it will flashing.

The service monitor LEDs indicate the error of wiring, as shown in the table below. For details about how to read the LED display, refer to the service manual.

If self-checking is not possible, check the indoor unit wiring and piping in the usual manner.

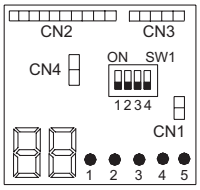
LED	1	2	3	4	5	Message
Status	OFF					Unit not connected
	ALL Flashing					Automatic checking impossible, all units connect wrong
	ALL ON					All units connect correctly
	ON	FLASHING	FLASHING	ON	FLASHING	**ON**: unit connect correctly **FLASHING**: unit connect wrong, need to change the wiring manually between 2,3,and 5
	ON	FLASHING	FLASHING	ON	ON	**ON**: unit connect correctly **FLASHING**: unit connect wrong, need to change the wiring manually between 2,3
						Abnormal

- Test running.

1) If the temperature is lower than 16 ^{o}C, it is impossible to test cooling with remote controller, and also when the temperature is higher than 30 ^{o}C, it is impossible to test heating.
2) To test cooling, set the lowest temperature at 16 ^{o}C. To test heating,set the highest temperature, at 30 ^{o}C.
3) Please check both cooling and heating operation of each unit individually and then also check the simultaneous operation of all indoor units.
4) After ruuning the unit for about 20 minutes, check the indoor unit outlet temperature.
5) After the unit is stopped, or working mode changed, the system will not start again for about 3 minutes.
6) During cooling operation, frost may ocur on the indoor unit or pipes, this is normal.
7) Operate the unit according to the operation manual. Please kindly explain to our customers how to operate through the instruction manual.

- Seven-segment numeric display

1) When unit is runing, this seven-segment numeric will display the frequency of compressor. For example, 40 means compressor running frequency is 40 Hz, 108 means compressor running frequency is 108Hz.
2) When faulty happens, seven-segment numeric will flash and display some numbers, this number is failure code. For example, a flashing 32 means No.32 failure, that is indoor and outdoor communication error.



- Communication LED

5 green LED means 5 indoor units. If one LED keep lighting that means the corresponding indoor unit has good communication with outdoor unit. If one LED is not lighting, that means there is no communication between indoor and outdoor.

4.5. Cassette type

Installation Tools

1.Installation tools

The installation tools listed in the following sheet can be used as required.

1. Screw driver
2. Hacksaw
3. Drill with a diameter of 60mm
4. Inner hexagon spanner,shifting spanner
5. Spanner (14, 17, 19,24,27mm)
6. Pipe cutter
7. Pipe expander
8. Knife
9. Pincers
10. Leakage detector or soapy water
11. Band tape
12. Scraper
13. Refrigerant oil

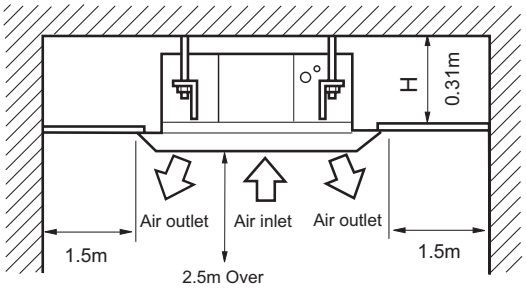
2.Accessories (factory provided)

Symbol	Parts Name
A	Adhesive tape
B	Pipe clamp
C	Connecting hose
D	Drainage hose
E	Non-hydroscopic heat insulating material
F	Gypsum powder

Installation Procedures

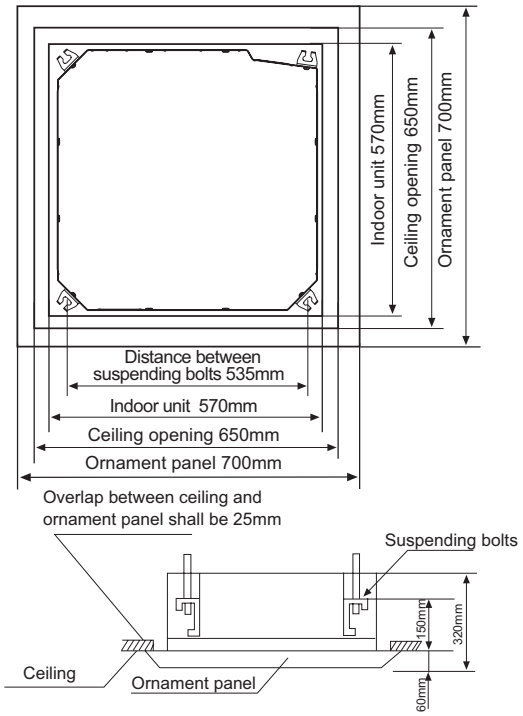
1.Selection of Installation Place

(1) Place above the ceiling where have enough space to arrange the unit.
(2) Place where the drainage pipe can be arranged well.
(3) Place where inlet and outlet air of indoor and outdoor unit will not be blocked.
(4) Do not expose the unit to the place with heavy oil or moisture (e.g.kitchen and workshop).
(5) Do not set the unit in the place where destructive gas (such as sulfuric acid gas) or pungent gas (thinner and gasoline) concentrates and retains.
(6) Place strong enough to support the unit weight.
(7) No expensive articles such as television and piano below indoor unit.
(8) Enough space for maintenance.
(9) Place more than 1m away from television and radio to avoid disturbing television and radio.
(10) Easy for maintenance.



2.Installation Preparation

(1) Position of ceiling opening between unit and suspending bolt (front view of unit).



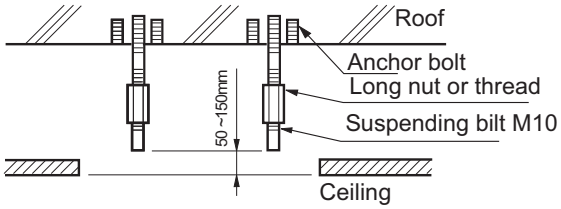
(2) Prepare all piping (refrigerant,water drainage)and wires (connection wire of remote controller, indoor unit connection wires) to the indoor unit before installation in order to connect indoor unit immediately after installation.

Installation Procedures

(3) Install a suspending bolt

To support the unit weight ,anchor bolt should be used in the case of already exists ceiling. Fow new ceiling, use flush-in type bolt, built-in type bolt or parts pretared in the field.
Before going on installing, adjust space to ceiling.

<Installation Example>



Note: All the above mentioned parts shall be prepared in feild, the diameter of suspending bolt is M10

3. Installation of indoor unit

In case of no ceiling
Install unit temporarily

Put suspending bracket on the suspending bolt to hang the unit up. Be sure to use nut and washer at both end of the breaket to secure firmly.

After installation on the ceiling

(1) Adjust unit to its right position (Refer to preparation for installation-(1))

(2)Check that unit is horizontal.

Water pump and floating switch is installed inside indoor unit,check four corners of the unit for its lever using horizontal comparator or PVC tube with water.(If unit is tilting against the direction of water drainage, problem may occur on floating water leakage.)

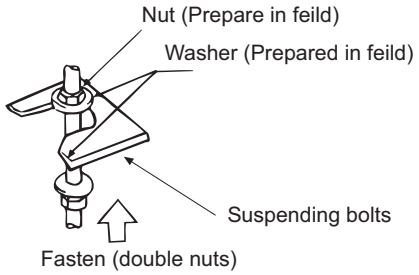
In the case of ceiling already exists

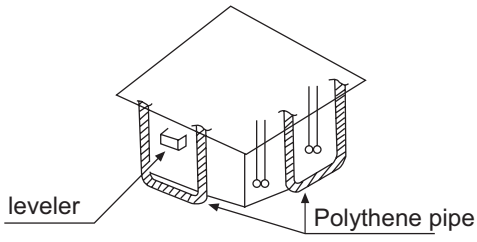
(1)Install unit temporarily

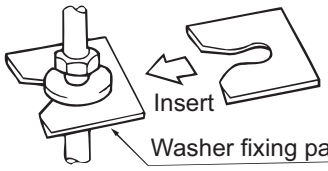
Put suspending bracket on the suspending bolt to hang the unit up.Be sure to use nut and washer at both end of the bracket to secure it firmly.

(2)Adjust the height and position of the unit.

(3)Proceed with procedure (4) of " In the case of no ceiling "





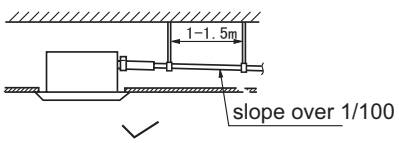


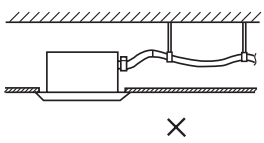
[secure the washer firmly]

4. Installation of water drainage pipe

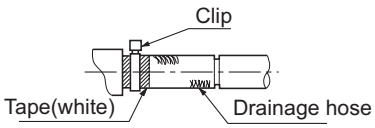
(1) Install water drainage pipe

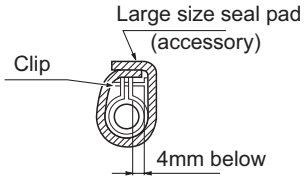
- Pipe diameter shall be equal or larger than that of connecting pipe (Pipe of polythene; size:25mm; O.D.: 32mm)
- Drainpipe should be short, with a downward slope at least 1/100 to prevent air bag from forming.
- If downward slope of drainpipe cannot be made,lifting pipe shall be installed.
- Keep a distance of 1-1.5m between suspending bolts, to make water hose straight.





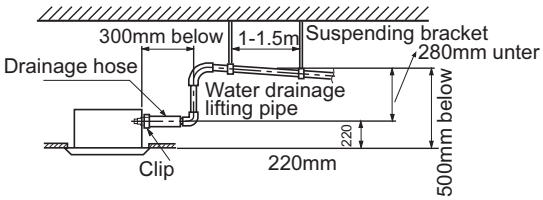
- Use the drainage hose and clip provided with unit.
  Insert water pipe into water plug until it reaches the white tape.
  Tighten the clip until head of the screw is less than 4mm from hose.
- Wind the drainage hose to the clip using seal pad for heat insulation.
- Insulate drainage hose in the room.

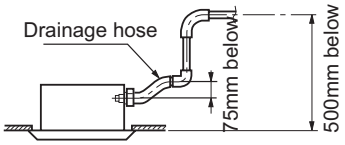




5. Cautions for the water drainage lifting pipe

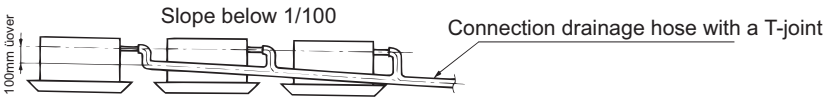
- Installation height of water drainage lifting pipe shall be less than 280mm
- There should be a right angle with unit ,300mm from unit.





< Note >

- The slope of water drainage hose shall be within 75mm , make the drainage plug not to bear excessive force.
- If several water hoses join together, of as per following procedures.



Specifications of the selected drainage hoses shall meet the requirements for the unit running

6. Installation of Ornament Panel

Install ornament panel on indoor unit

(1) Check whether indoor unit is horizontal with leveler or polythene pipe filled with water , and check that the dimension of the ceiling opening is correct. Take off the lever gauge before installing the ornament panel.

(2) Fasten the screws to make the height difference between the two sides of indoor unit less than 5mm.

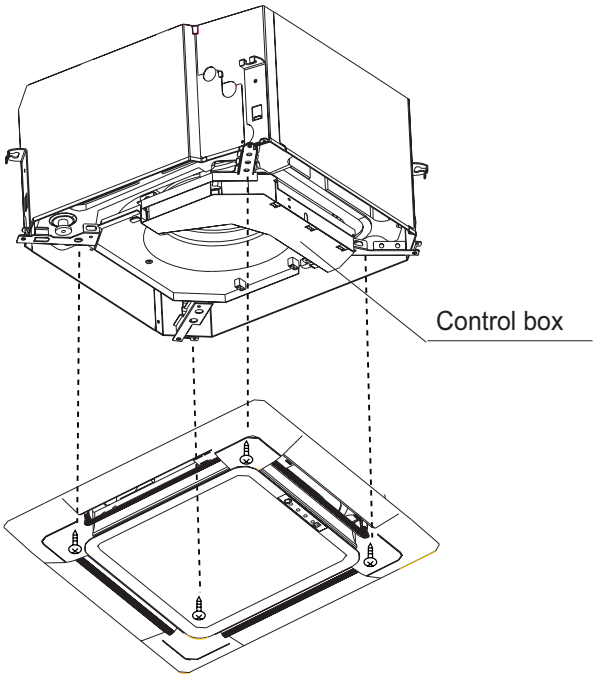
(3) First fix it with screws temporally.

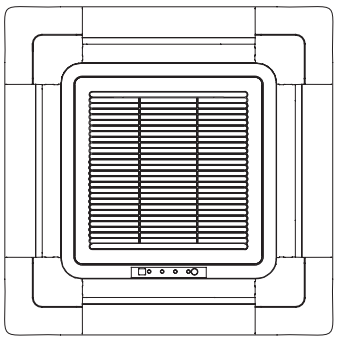
(4) Fasten the two temporally fixing screws and other two, and tighten the four screws.

(5) Connect the wires of synchro-motor.

(6) Connect the wire of signal.

(7) If no response of remote controller,check whether the wiring is correct,restart remote controller 10 seconds after shut off power supply.

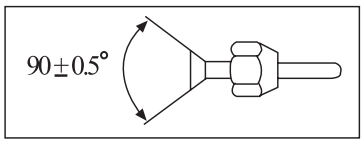




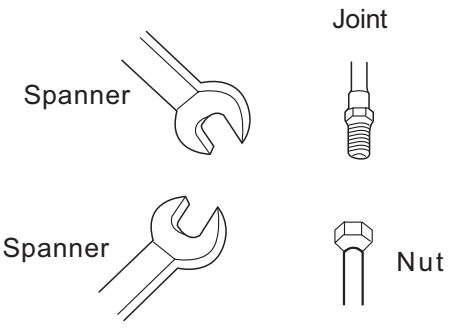
Limits of panel board installation

(1)Install the panel board in the direction shown in the figure.
(2)The incorrect direction will result in water leakage, meanwhile swing and signal receiving are not be connected successfully.

7. Piping Connection



- Fit the nut on and fasten



The maximum length and drop height of connecting pipe

- The maximum length is 20m
- The maximum drop height is 10m.
- To ensure the efficiency ,Pipes shall be as short as possible.

Cautions for piping connection

- Do not twist or deform the connecting pipe.
- Do not mix dusts.
- The bending radius shall be as large as possible.
- Both gas pipe and liquid pipe shall be heat insulation.
- No leakage in the flare.

Diameter of Pipe	Tighten Torque (N.m)
Liquid Pipe 6.35mm	11.8
Gas Pipe 9.52mm	50

If not aligned ,tighten the nut by force will damage the nut that result in gas leakage

Piping connection

- Connecting method

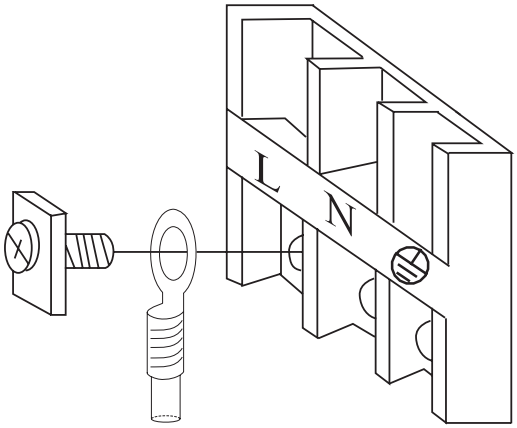
Smear refrigerant oil on the joints of piping and flare.
The bending radius shall be as large as possible.
Align the pipe center when fastening, and tighten the nut, as shown in the figure.
Pay attention to not mix foreign matters such as sands in.

8.Electrical Wiring

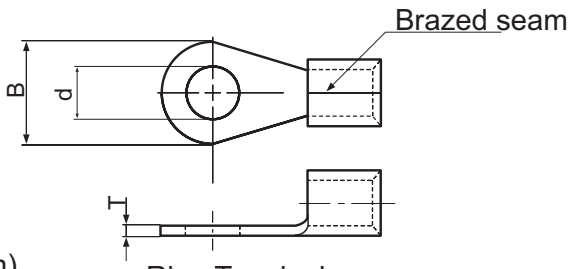
Wiring methods:

8.1 Wiring method of ring terminal

For connecting line whose end is a ring,its wiring method as shown in the right figure: remove wiring screw and pass it through the end ring of connecting line,then connect it to the terminal block and tighten screw.



Wiring method of ring terminal



Ring Terminal

B=8.0-9.0(mm)
d=4.3-5.3(mm)
T=1.0-2.0(mm)
(For your reference)

4.6. Convertible type

SELECTING THE MOUNTING POSITION

⚠ WARNING

Install at a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or fall

⚠ CAUTION

(1)Do not install where there is the danger of combustible gas leakage.

(2) Do not install near heat sources.

(3) If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

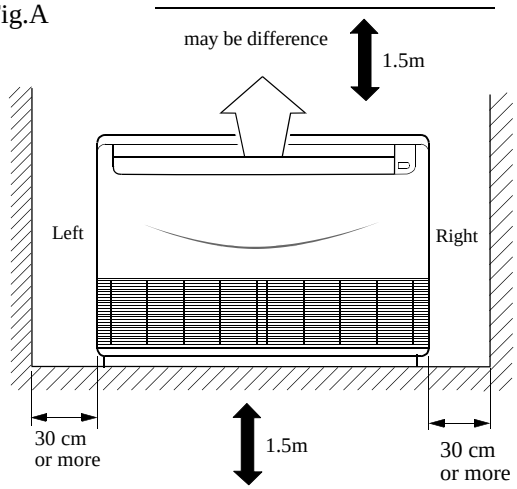
Decide the mounting position with the customer as follows:

INDOOR UNIT

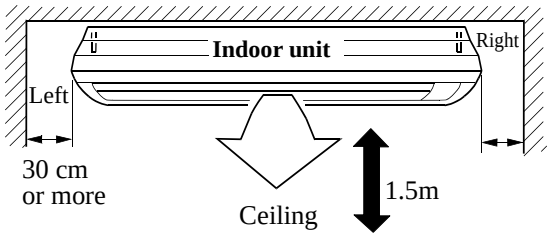
(1) Install the indoor unit level on a strong wall, floor, ceiling which is not subject to vibration.
(2) The inlet and outlet ports should not be obstructed: the air should be able to blow all over the room.
(3) Install the unit near an electric outlet or special branch circuit.
(4) Do not install the unit where it will be exposed to direct sunlight.
(5) Install the unit where connection to the outdoor unit is easy.
(6) Install the unit where the drain pipe can be easily installed.
(7) Take servicing, etc. into consideration and leave the spaces shown in Fig.A. Also install the unit where the filter can be removed.

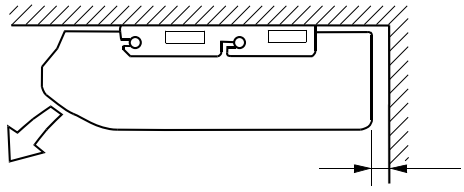
- **Floor console**

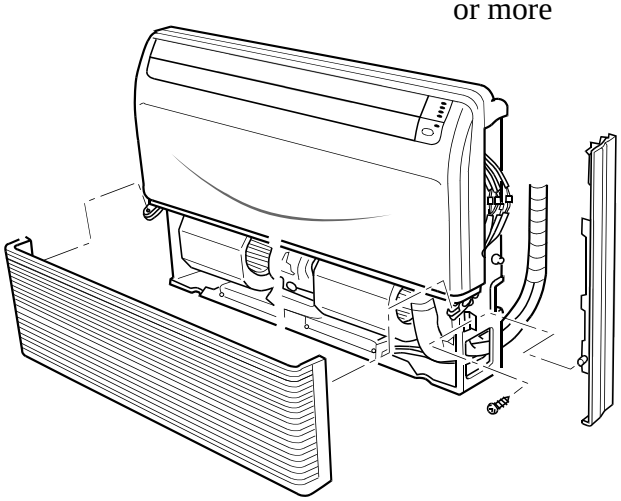
Fig.A



- **Under ceiling**







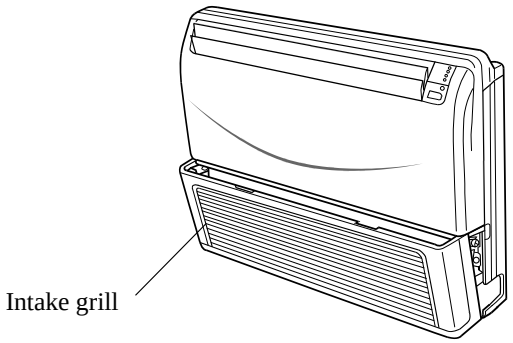
Indoor unit

PREPARING INDOOR UNIT INSTALLATION

REMOVE THE INTAKE GRILL

Open the intake grill and remove the three or four or six screws.(Fig. 1)

Fig. 1

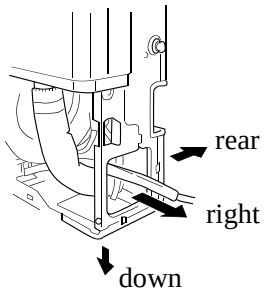


Remark:
The main unit can be wired before the indoor unit is installed. Select the most appropriate installation order.

A. FLOOR CONSOLE TYPE

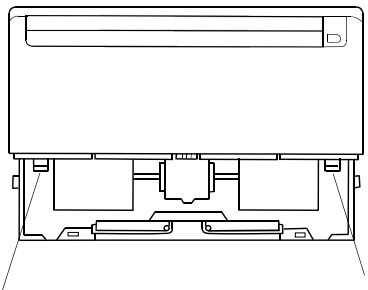
1. DRILLING FOR PIPING
   Select piping and drain directions.(Fig.2)
   The piping and drain can be made in three directions as shown below.

(Fig.2)



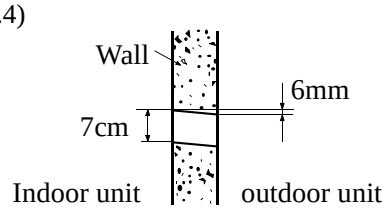
The drain hose can be connected to either the left or right side.(Fig.3)

(Fig. 3)



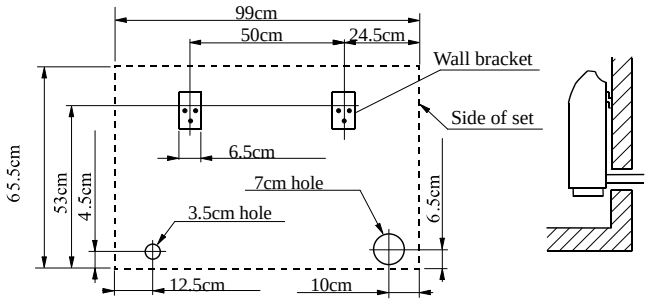
When the directions are selected, drill a 7 cm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow. When the pipe is led out from the rear, make a hole in Fig.4, at the position shown.

(Fig.4)



When installing set to wall, install the accessory wall bracket at the position shown in Fig.5,and mount the set to it.

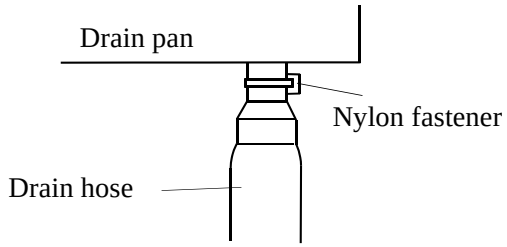
(Fig. 5)



2. INSTALLING DRAIN HOSE

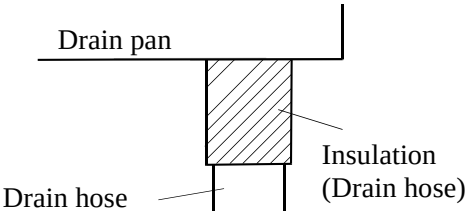
Select whether the drain hose will be connected to the left or right side.(Fig.3) Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener. (Fig.6)

(Fig. 6)



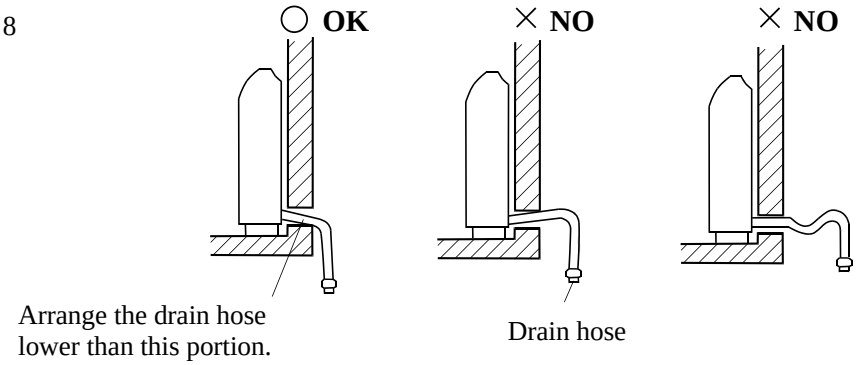
Wrap the insulation (drain hose) around the drain hose connection. (Fig.7)

(Fig. 7)



Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit.

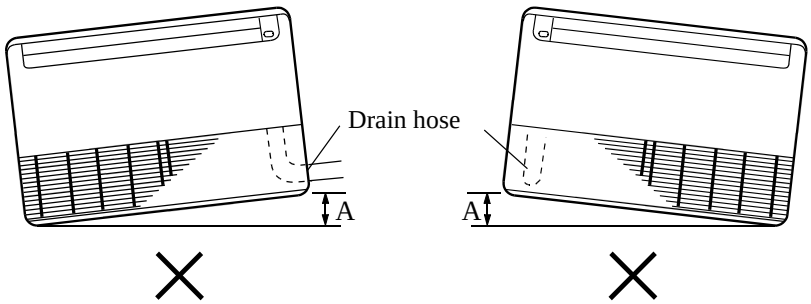
Fig. 8



⚠ CAUTION

Do not install the unit drain hose side is too high. Height A should be less than 5 mm.(Fig.9)

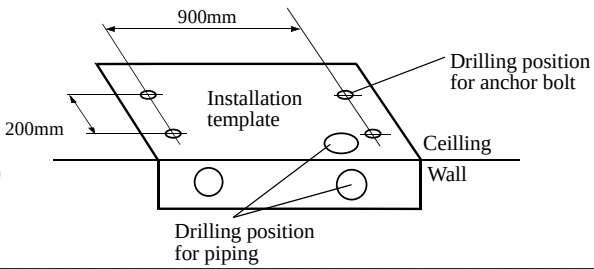
Fig. 9



B. UNDER CEILING TYPE

Using the installation template, drill holes for piping and anchor bolts(for holes).(Fig.10)

Fig. 10



1. DRILLING FOR PIPING

Select piping and drain directions. (Fig.11)

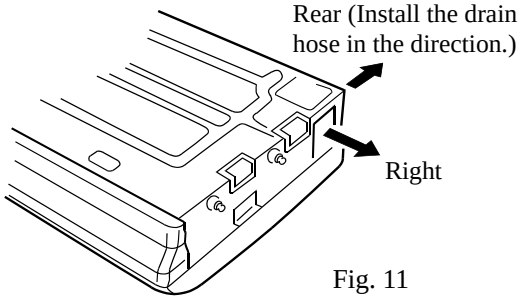


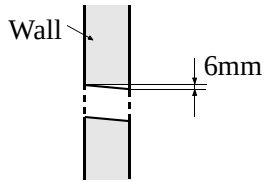
Fig. 11

⚠ CAUTION

Install the drain hose at the rear; it should not be installed on the top or right side.

When the directions are selected, drill 80mm and 50mm or 150mm dia. hole on the wall so that the hole is tilted downward toward the outdoor for smooth water flow.

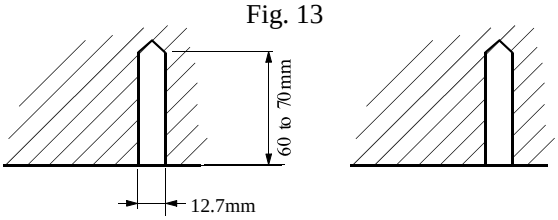
Fig. 12



2. DRILLING HOLES FOR ANCHOR BOLTS AND INSTALLING THE ANCHOR BOLTS

With a concrete drill, drill four 12.7 mm dia. Holes. (Fig.13)

Fig. 13



Insert the anchor bolts into the drilled holes, and drive the pins completely into the anchor bolts with a hammer. (Fig. 14)

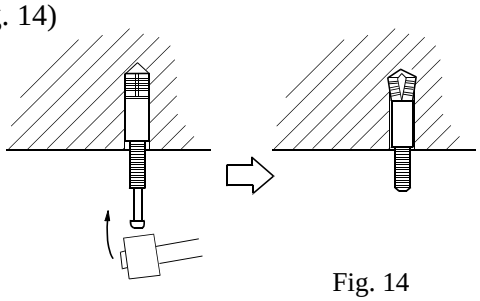
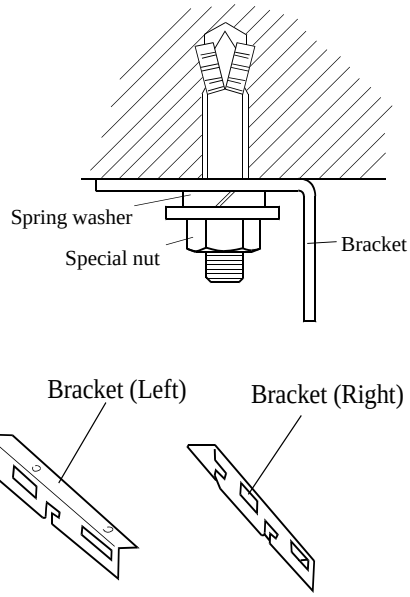


Fig. 14

3. INSTALLING BRACKETS

Install the brackets with nuts, washers and spring washers.(Fig. 15)

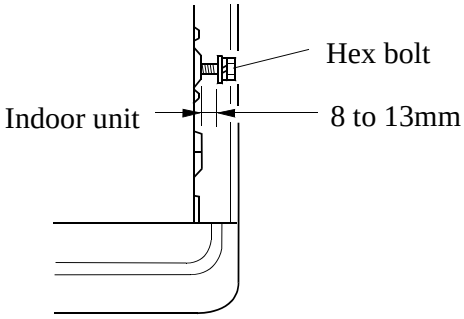
Fig. 15



4. INSTALLING INDOOR UNIT

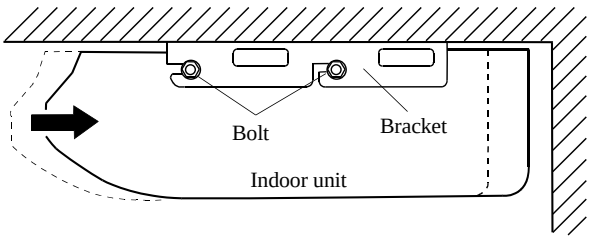
Reset the hex bolts as shown in Fig.16.

Fig. 16



Apply the indoor unit to the brackets.(Fig.17)

Fig. 17



Now, securely tighten the hex bolts in both sides.

5. INSTALL THE DRAIN HOSE

Select whether the drain hose will be connected to the left or right side.(Fig.3)
Insert the drain hose into the drain pan, then secure the drain hose with a nylon fastener.(Fig.6)
Wrap the insulation (drain hose)around the drain hose connection.(Fig.7)
Be sure to arrange the drain hose correctly so that it is leveled lower than the drain hose connecting port of the indoor unit.(Fig.18)

Fig. 18

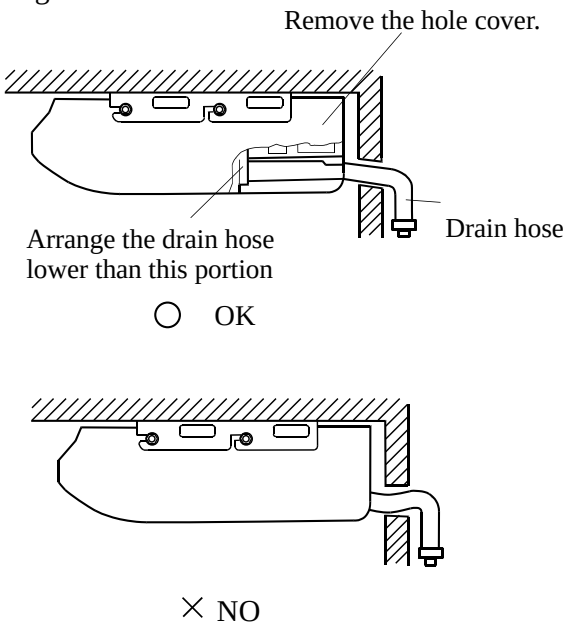
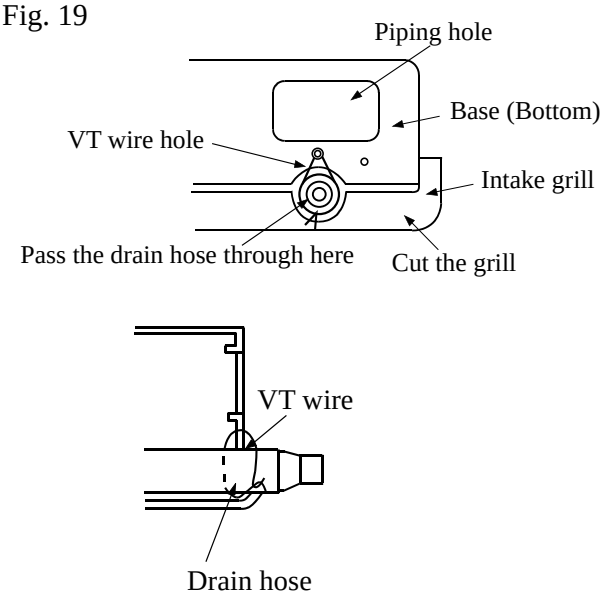


Fig. 19



OUTDOOR UNIT INSTALLATION

CONNECTING THE PIPING

1. FLARE PROCESSING

(1) Cut the connection pipe with pipe cutters so that the pipe is not deformed.

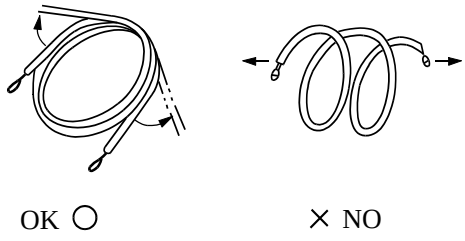
(2) Holding the pipe downward so that cuttings cannot enter the pipe, remove the burrs.

(3) Remove the flare nut from the indoor unit pipe and outdoor unit and insert the flare nut onto the pipe, and flare with a flaring tool.

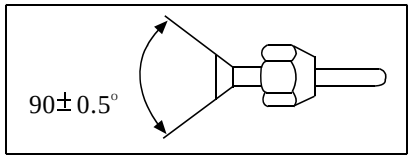
2. BENDING PIPES

The pipes are shaped by your hands. Be careful not to collapse them.

Fig. 21



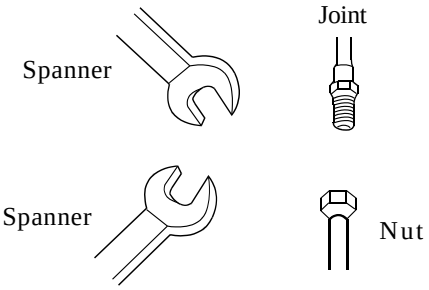
3. PIPING CONNECTION



- Fit the nut on and fasten

  The maximum length and drop height of connecting pipe

- Please refer to the installation manual of outdoor unit
- To ensure the efficiency , Pipes shall be as short as possible.



Cautions for piping connection

- Do not twist or deform the connecting pipe.
- Do not mix dusts.
- The bending radius shall be as large as possible.
- Both gas pipe and liquid pipe shall be heat insulation.
- No leakage in the flare.

Diameter of Pipe	Tighten Torque (N.m)
Liquid Pipe 6.35mm	11.8
Gas Pipe 12.7mm	49.0

Piping connection

- Connecting method

Smear refrigerant oil on the joints of piping and flare.
The bending radius shall be as large as possible.
Align the pipe center when fastening, and tighten the nut, as shown in the figure.
Pay attention to not mix foreign matters such as sands in.

If not aligned ,tighten the nut by force will damage the nut that result in gas leakage

HOW TO CONNECT WIRING TO THE TERMINALS

A. For solid core wiring (or F-cable)(Fig.24A)

(1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 25mm of the exposed solid wire.

(2) Using a screwdriver, remove the terminal screw(s) on the terminal board.

(3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.

(4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screw driver.

B. For strand wiring(Fig.24B)

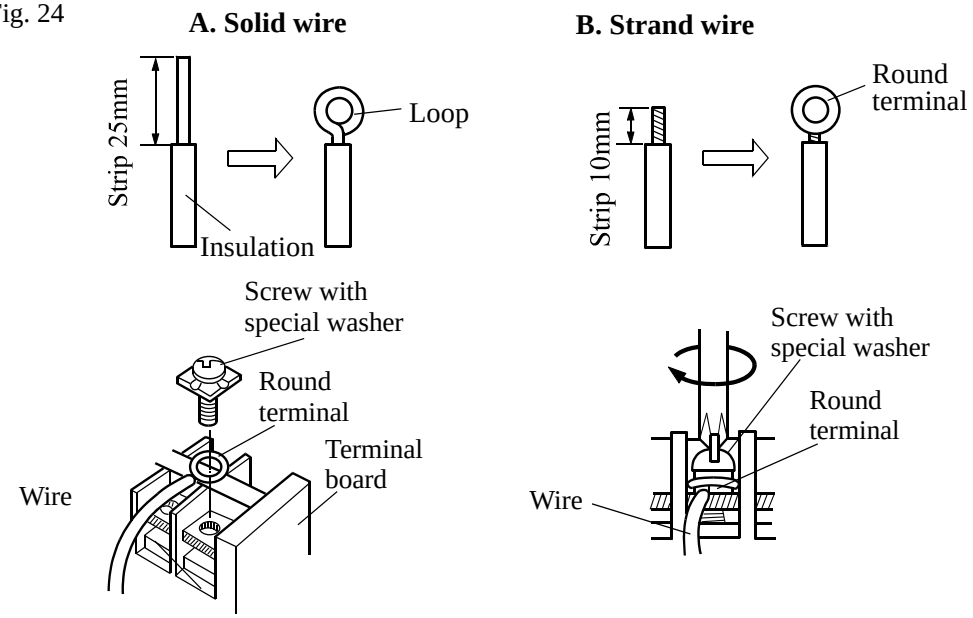
(1) Cut the wire with a wire cutter or wire-cutting pliers, then strip the insulation to about 10mm of the exposed strand wiring.

(2) Using a screwdriver, remove the terminal screw(s)on the terminal board.

(3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.

(4) Position the round terminal wire, and replace and tighten the terminal screw using a screw driver.

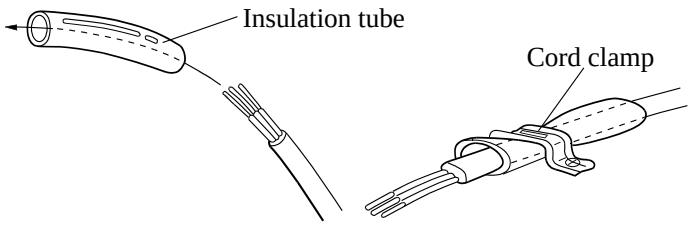
Fig. 24



HOW TO FIXED CONNECTION CORD AND POWER CABLE AT THE CORD CLAMP

After passing the connection cord and power cable through the insulation tube, fasten it with the cord clamp, as shown in Fig.25

Fig. 25



Use VW-1, 0.5 to 1.0 mm thick, PVC tube as the insulation tube.

ELECTRICAL WIRING

⚠ CAUTION

(1) Match the terminal block numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning of the electric parts.

(2) Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.

(3) Always fasten the outside covering of the connection cord with the cord clamp.(If the insulator is chafed, electric leakage may occur.)

(4) Always connect the ground wire.

1. INDOOR UNIT SIDE

(1) Remove the electric component box.

Fig. 26

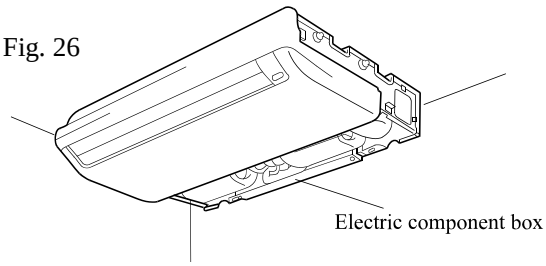
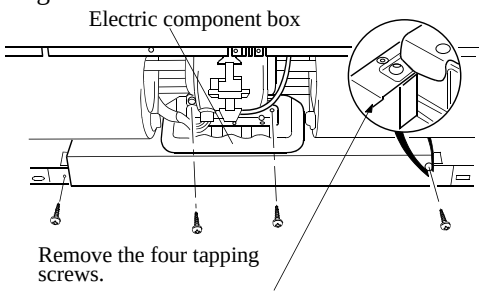


Fig. 27

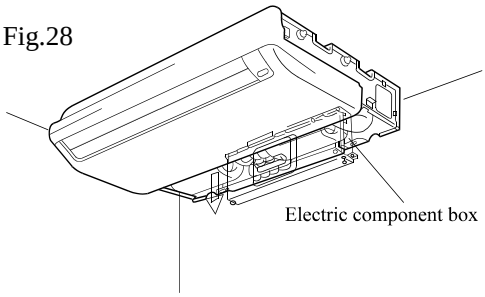


⚠ CAUTION

Do not remove the screws. If the screws are removed, the electric component box will fall.

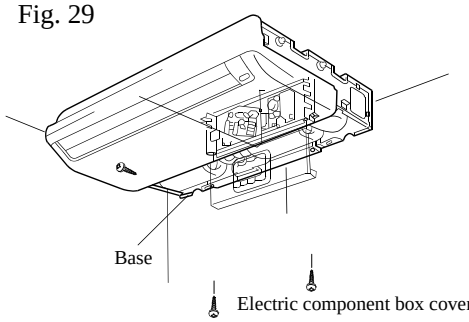
(2) Pull out the electric component box.

Fig.28



(3) Remove the electric component box cover.

Fig. 29



Remove the three tapping screws.

⚠ CAUTION

Be careful not to pinch the lead wires between the electric component box and base.

(4) Wiring

(1) Remove the cord clamp.

(2) Process the end of the connection cords to the dimensions shown in Fig.34.

(3) Connect the end of the connection cord fully into the terminal block.

(4) Fasten the connection cord with a cord clamp.

(5) Fasten the end of the connection cord with the screw.

ELECTRICAL WIRING

⚠ WARNING

(1) Always use a special branch circuit and install a special receptacle to supply power to the room air conditioner.

(2) Use a circuit breaker and receptacle matched to the capacity of the room air conditioner.

(3) The circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.

(4) Perform wiring work in accordance with standards so that the room air conditioner can be operated safely and positively.

(5) Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

⚠ CAUTION

(1) The power source capacity must be the sum of the room air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.

(2) When the voltage is too low and the air conditioner is difficult to start, contact the power company the voltage raised.

TEST RUNNING

1. CHECK ITEMS

(1) INDOOR UNIT

(1) Is operation of each button on the remote control unit normal?
(2) Does each lamp light normally?
(3) Do not air flow direction louvers operate normally?
(4) Is the drain normal?

(2) OUTDOOR UNIT

(1) Is there any abnormal noise and vibration during operation?
(2) Will noise, wind, or drain water from the unit disturb the neighbors?
(3) Is there any gas leakage?

CUSTOMER GUIDANCE

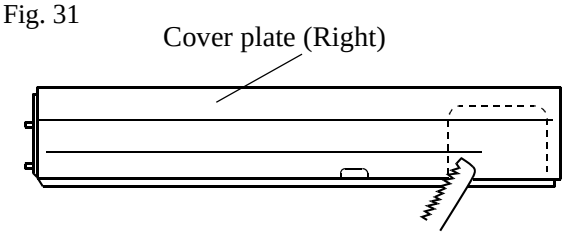
Explain the following to the customer in accordance with the operating manual:
(1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
(2) Air filter removal and cleaning, and how to use air louvers.
(3) Give the operating and installation manuals to the customer.

MOUNT THE COVER PLATE AND THE INTAKE GRILL

1.Mount the cover plate. (Right)

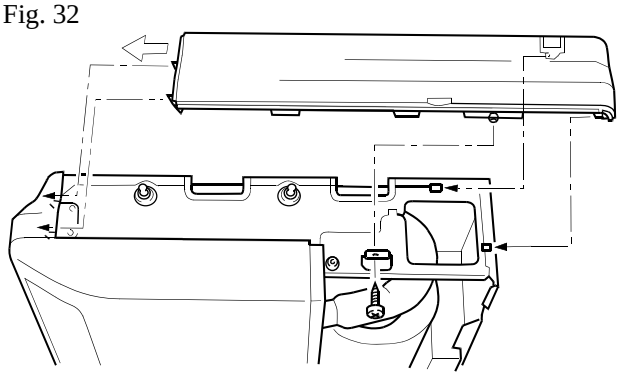
(1) Cut a pipe exit hole in the right plate. This is only when the pipe exits from the right side. (This operation is not required when the protrusion is on the top or rear.)

Fig. 31



(2) Join the cover plates (right) and mount with screws.

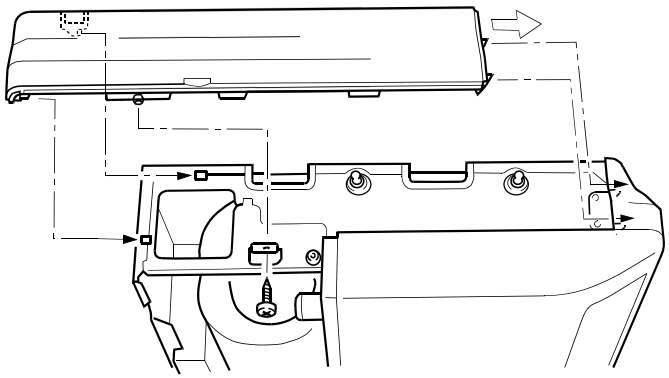
Fig. 32



2. Mount the cover plate.(Left)

(1) Join the cover plate (left) and mount with screws.

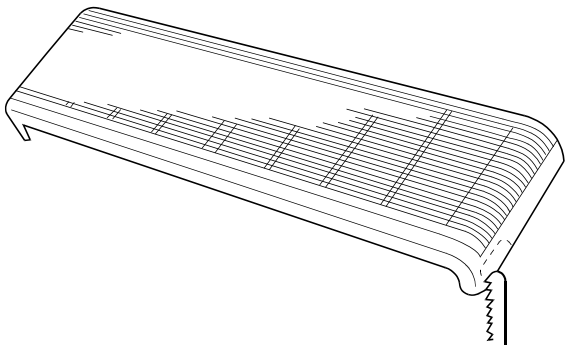
Fig. 33



3. Mount the intake grill.

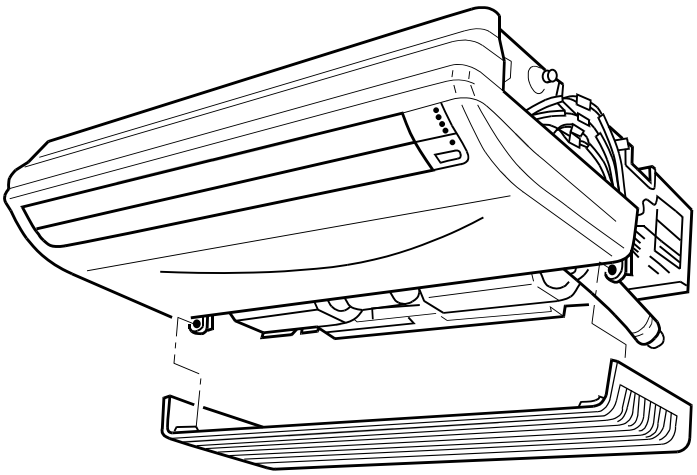
(1) Cut the right side of the intake grill. This is only when the pipe exits from the right side

Fig. 34



(2) Insert the hinges on the bottom of the intake grill into the holes in the base assembly. Then mount the arms to the three areas on the top of the intake grill.

Fig. 35



4.7 Duct type

2. Preparation for installation

Installation tools

1	Screw Driver (flat head, wabbler, triangle)	8	Pipe Expander
2	Steel Saw	9	Knives
3	60mm Drill	10	Clippers
4	Inner Hexagon Spanner	11	Leakage Checker or Soap Liquid
5	Shifting Spanner	12	Measuring Tape
6	Spanner	13	Scraper or File
7	Pipe Cutter	14	Refrigeration Oil

3. Accessories for installation

Self-contained accessories

No.	A	B	C	D	E	F
Name of Parts	Non-adhesive Tape	Adhesive tape	Connecting Hose	Heat insulation material	Gypsum powder	Drain hose

4. Choose the installation place

- Install the indoor unit where the weight of the unit can be supported.
- Install the indoor unit where the heat source and steam source are not close and the unit inlet and outlet are not blocked.
- Install the indoor unit where the drainage is easy and the outdoor unit can be easily connected.
- Install the indoor unit where its cold air and hot air can be easily sent to all the corners of the room.
- Install the indoor unit where the power socket is near and there is sufficient space around the indoor unit.
- Install the indoor unit where there is no T.V set, radio set, and wireless appliance underneath, and the sunlight lamp is over one meter away.
- If the remote controller is installed on the wall, the indoor unit shall be ensured to receive the signal while the sunlight lamp is on.

5. Installation procedure

1. Drill a hole in the wall and insert the connecting pipe and wire through a PVC wall-through tube purchased locally. The wall hole shall be with a outward down slope of at least 1/100. (See Figure 1)
2. Before drilling check that there is no pipe or reinforcing bar just behind the drilling position. Drilling shall avoid at positions with electric wire or pipe.
3. Mount the unit on a strong and horizontal building roof. If the base is not firm, it will cause noise, vibration or pipe broken and refrigerant leakage (see Figure 6).
4. Support the unit firmly.
5. Change the form of the connection pipe, connection wire and drain pipe so that they can go through the wall hole easily.

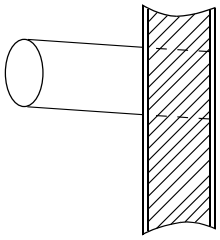


Fig 1

- When installing the ceiling concealed type indoor unit, a specially designed return air bellows shall be installed, as shown in Figure 3, Figure 4.

Figure 3

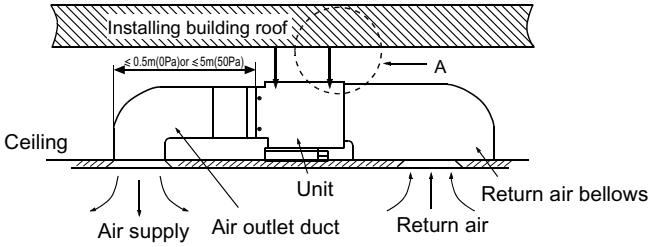
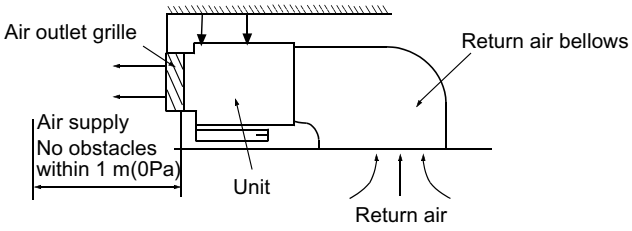


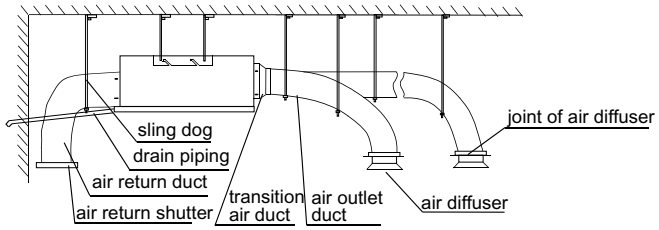
Figure 4



- Each air return and supply duct should fix to the floor precast slab by using an iron stand. Use glue to seal the interface closely. Recommend the distance between the air return duct and the wall is more than 150mm.

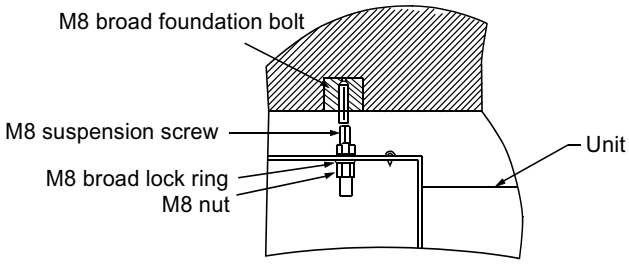
- The distance between air duct outlet and air conditioner outlet is according to the length of actually installed air duct and in service behavior of the static pressure terminal: Installation sketch map for long and short air duct is showed below, when connect to short air duct, using low static terminal (terminal color is white), the distance between air duct outlet and air conditioner outlet is no more than 0.5m; when connect to long air duct, using middle static terminal (terminal color is red), the distance between air duct outlet and air conditioner outlet could be within 5m at this point.

Figure 5



- Drain piping of condensed water should keep a downhill grade of 1% or more. Use insulating pipe to cover the drain piping of condensed water to keep warmth.
- As figure shown, suspend and install the unit.

Figure 6



Installation for air duct of indoor unit

1. Installation of air discharge duct

- This type of unit uses circular air duct with its caliber of 180mm.
- An additional transitive air duct is necessary for the circular air duct to connect to the air supply inlet. It should be also connected to its respective air diffuser separately. See Fig.1. Adjust the wind speed of each air diffuser outlet to keep in line on the whole, so as to meet a demand of the air conditioner in the room.

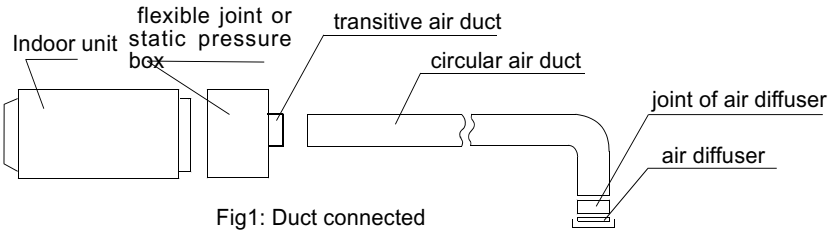


Fig1: Duct connected

2. Installation of air return duct

Use rivets to connect the air return duct to the air return inlet of the indoor unit. The other end connects to the air return shutter. as shown in Fig.2.

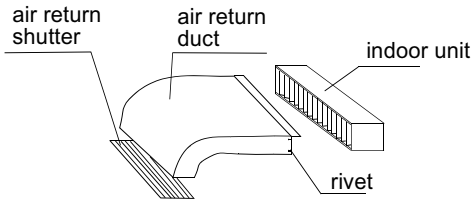


Fig2: Duct return connected

3. Air duct insulation

Insulation layer is needed for air supply and return duct. First, paste a glue nail to the air duct, and then attach the insulation cotton that has a tinfoil layer and use the glue nail cover to fix. Finally, seal the air duct interface with tinfoil adhesive tape closely. as shown in Fig3.

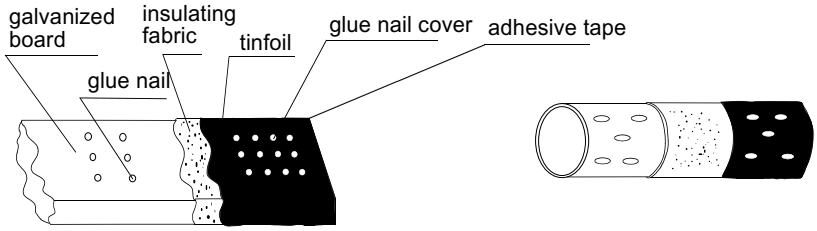


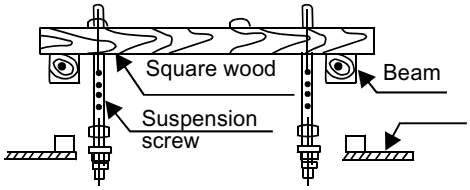
Fig3

Installing the suspension screw

Use M8 or M10 suspension screws (4, prepared in the field) (when the suspension screw height exceeds 0.9 m, M10 size is the only choice). These screws shall be installed as follows with space adapting to air conditioner overall dimensions according to the original building structures.

Wooden structure

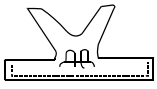
A square wood shall be supported by the beams and then set the suspension screws.



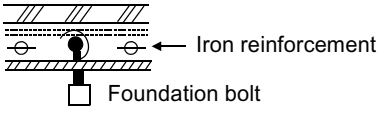
New concrete slab

To set with embedded parts, foundation bolts etc.

Knife embedded part



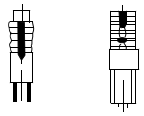
Guide plate embedded part



Pipe suspension foundation bolt

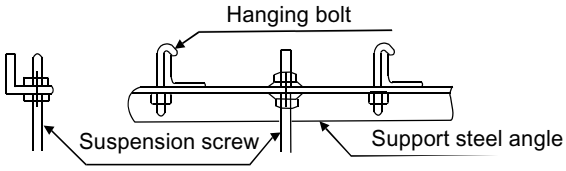
Original concrete slab

Use hole hinge, hole plunger or hole bolt.



Steel reinforcement structure

Use steel angle or new support steel angle directly.



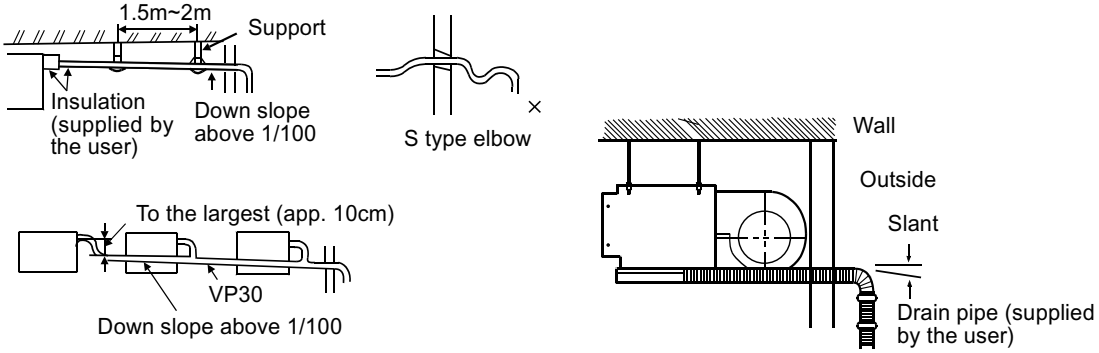
Hanging of the indoor unit

Fasten the nut on the suspension screw and then hang the suspension screw in the Tslot of the suspension part of the unit.
Aided with a level meter, adjust level of the unit within 5 mm.

⚠ CAUTION
In order to drain water normally, the drain pipe shall be processed as specified in the installation manual and shall be thermal insulated to avoid dew generation. Improper hose connection may cause indoor water leakage.

Requirements

- The indoor drain pipe shall be thermal insulated.
- The connection part between the drain pipe and the indoor unit shall be insulated so as to prevent dew generation.
- The drain pipe shall be slant downwards (greater than 1/100). The middle part shall not be of Stype elbow, otherwise abnormal sound will be produced.
- The horizontal length of the drain pipe shall be less than 20 m. In case of long pipe, supports shall be provided every 1.5 – 2m to prevent wavy form.
- Central piping shall be laid out according to the following figure.
- Take care not to apply external force onto the drain pipe connection part.



Pipe and insulation material	
Pipe	Rigid PVC pipe VP31.5mm (internal diameter)
Insulation	Foamed PE with thickness above 7mm

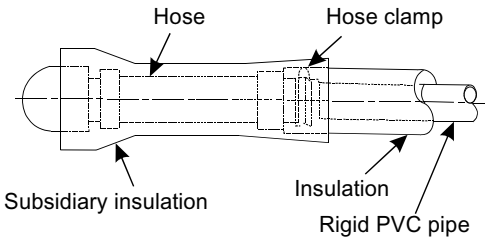
Hose

Drain pipe size: ? 19.05mm² (3/4") PVC pipe.
The hose is used for adjusting the off-center and angle of the rigid PVC pipe.

- Directly stretch the hose to install without making any deformation.
- The soft end of the hose must be fastened with a hose clamp.
- Please apply the hose on horizontal part

Insulation treatment:

- Wrap the hose and its clamp until to the indoor unit without any clearance with insulating material, as shown in the figure.



Drain confirmation

During trial run, check that there is no leakage at the pipe connection part during water draining even in winter.

Allowable pipe length and drop

These parameters differ according to the outdoor unit. See the instruction manual attached with the outdoor unit for details.

Supplementary refrigerant

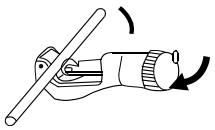
The refrigerant supplementation shall be as specified in the installation instructions attached with the outdoor unit. The added refrigerant shall be R410a.
The adding procedure shall be aided with a measuring meter for a specified amount of supplemented refrigerant

Requirement

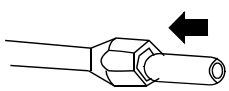
Overfilling or underfilling of refrigerant will cause compressor fault. The amount of the added refrigerant shall be as specified in the instructions.

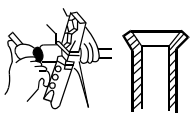
Pipe cutting and expanding

If the pipe is too long or the flare is damaged, it needs to be cut or expanded.


1. Pipe cutting

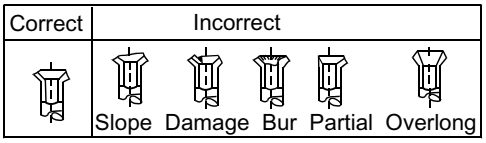
2. Removing burrs

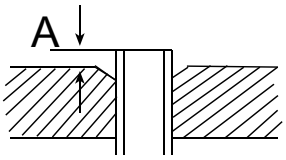

3.Insertion nut


4. Pipe expansion

Pipe expansion dimensions as follows:

Pipe diameter ?	Size A (mm)
6.35 mm (1/4")	0.8 ~ 1.5
9.52 mm (3/8")	1.0 ~ 1.8
12.7 mm (1/2")	1.2 ~ 2.0

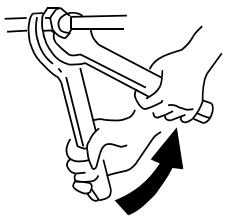




Pipe expander

- The connection of indoor unit pipes must use double spanners.
- The installing torque shall be as given in the following table.

Connecting pipe O.D.(mm)	Installing torque (N-m)	Increased installing torque (N-m)
? 6.35	11.8 (1.2kgf-m)	13.7 (1.4 kgf-m)
? 9.52	24.5 (2.5kgf-m)	29.4 (3.0 kgf-m)
? 12.70	49.0 (5.0 kgf-m)	53.9 (5.5 kgf-m)


Double-spanner operation

4.Trial operation

The person who has completed this installation shall be requested to conduct a test operation for check:

Is the temperature adjuster working normally?

Does the location for installation conform to requirements?

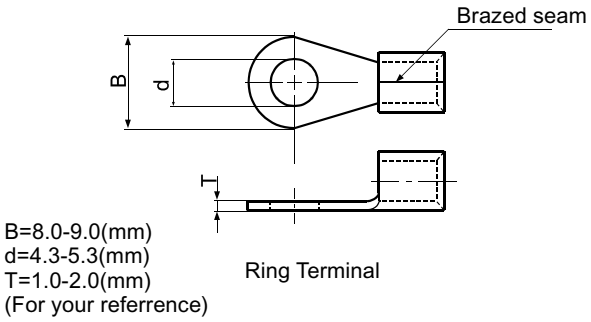
Winding up with Protective Plastic Tape.The connection pipes,drain pipe, and the connection wires shall be wound up with PVC tape.

NOTE!
The connection pipes shall also be wound up with insulating material to preserve the temperature. The airing direction shall be from bottom to top.

Wiring methods:

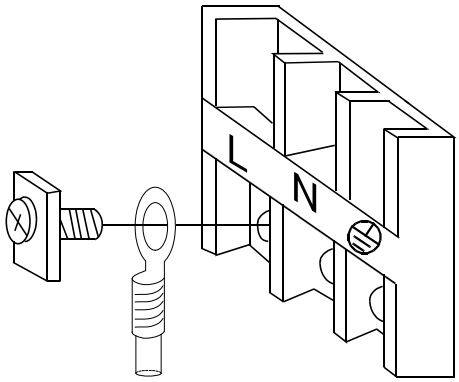
① Wiring method of ring terminal

For connecting line which end is a ring,its wiring method as shown in the right figure: remove wiring screw and pass it through the end ring of connecting line,then connect it to the terminal block and tighten screw.



B=8.0-9.0(mm)
d=4.3-5.3(mm)
T=1.0-2.0(mm)
(For your referrence)

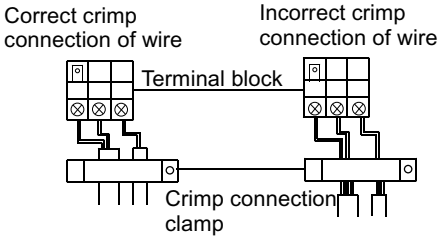
Ring Terminal



Wiring method of ring terminal

② Wiring method of straight terminal

For connecting line which end is not a ring, its wiring method as follows: loosen wiring screw ans insert the end of connecting line totally into the terminal block,then tighten the screw and pull the connecting line slightly to confirm that it is clamped firmly.



③ Crimp connection method of connecting line

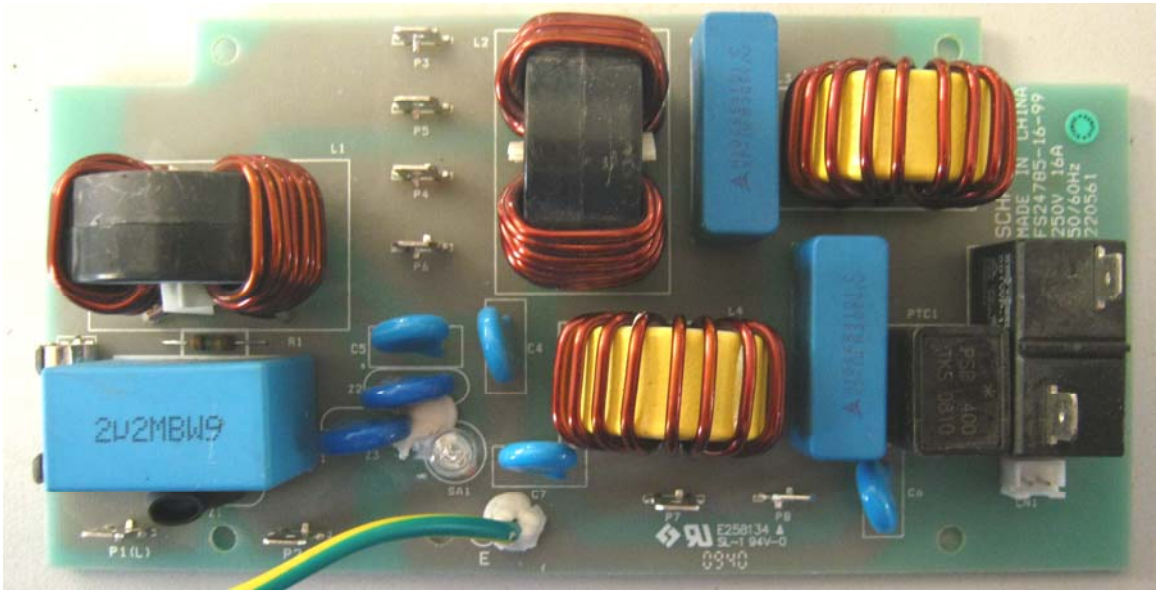
After finishing wiring.connecting line must be fastened by wire clamp,which pressed on the external sheath of the connecting line, as shown in the right figure:

5. PCB photo,Wiring diagram and function description

5.1 Outdoor unit

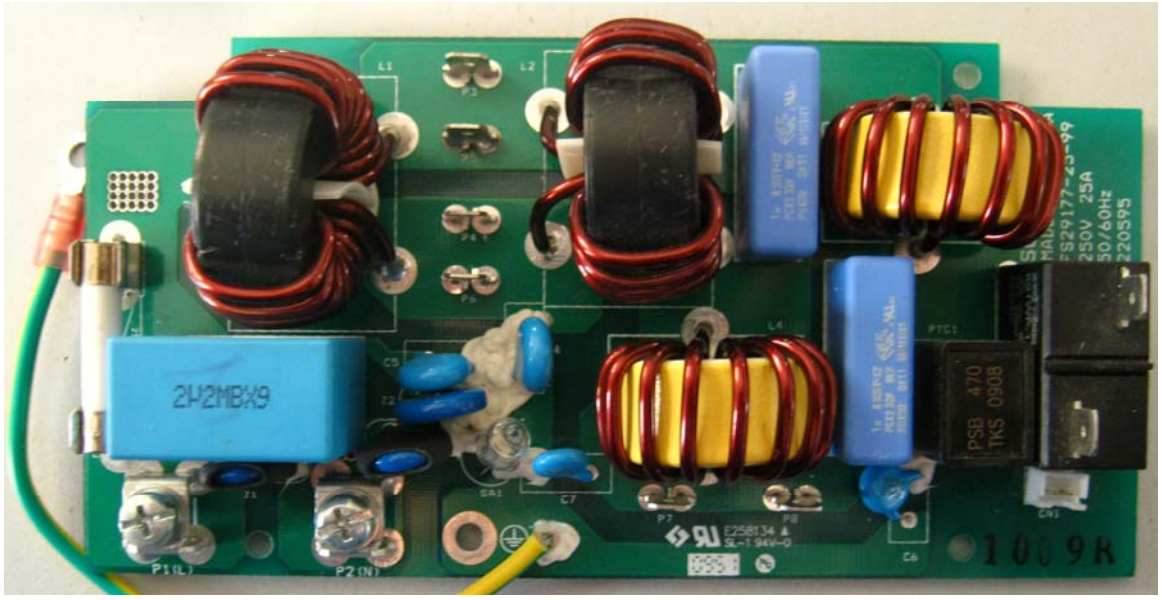
5.1. 1. Outdoor PCB photo

YJU3YH019BARRA-X filter board

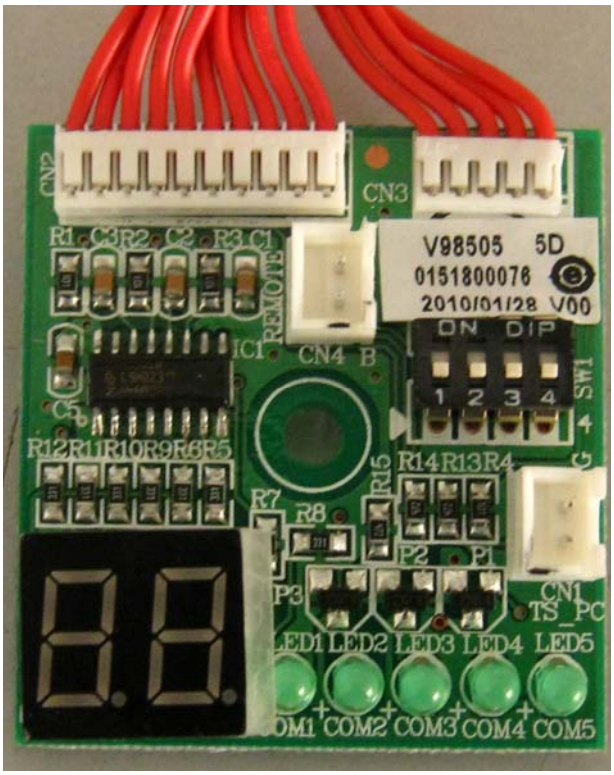


YJU4YH025/30BARRA-X filter board

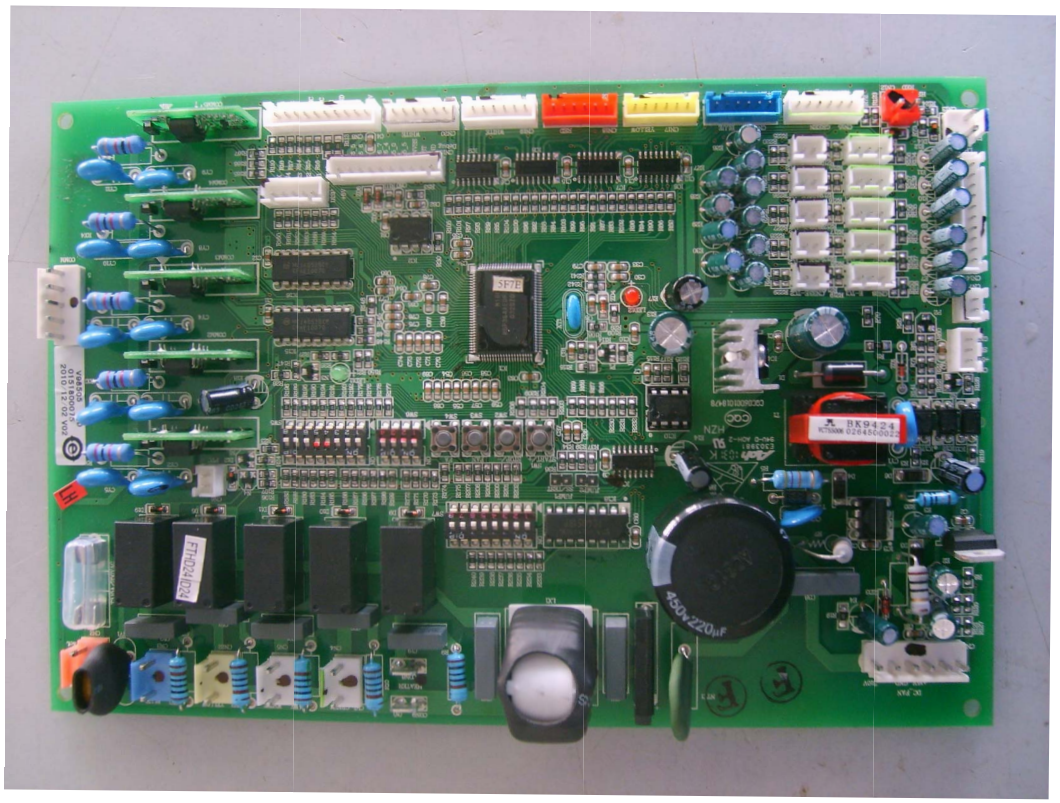
YJU5YH034BARRA-X filter board



outdoor display board(small service PCB)

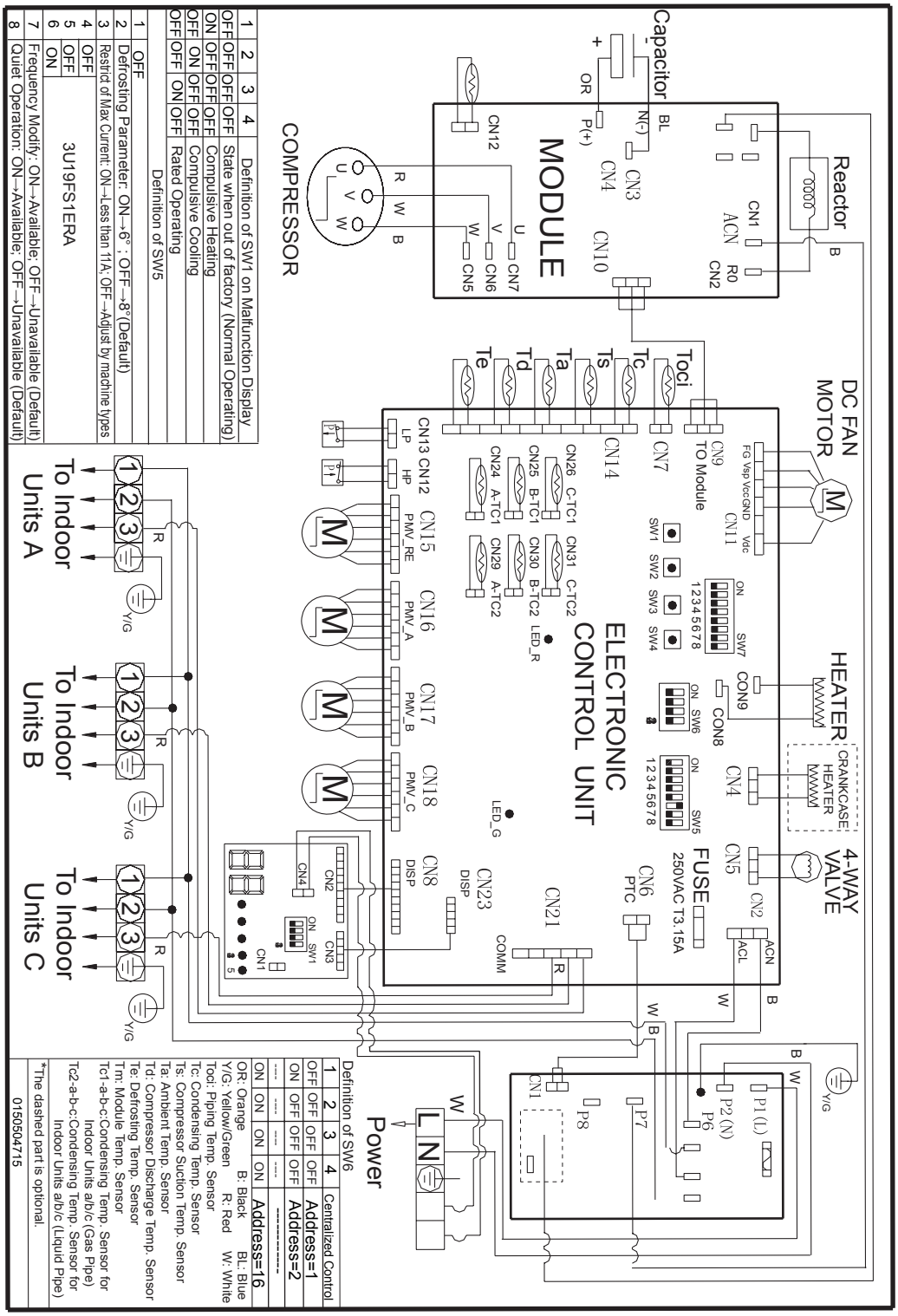


outdoor main board



5.1.2. Wiring diagram

YJU3YH019BARRA-X



1	2	3	4	Definition of SW1 on Malfunction Display
OFF	OFF	OFF	OFF	State when out of factory (Normal Operating)
ON	OFF	OFF	OFF	Compulsive Heating
OFF	ON	OFF	OFF	Compulsive Cooling
OFF	OFF	ON	OFF	Rated Operating

Definition of SW5	
1	OFF
2	Defrosting Parameter: ON→6° ; OFF→8°(Default)
3	Restrict of Max Current: ON–Less than 11A; OFF–Adjust by machine types
4	OFF
5	OFF
6	ON
	3U19FS1ERA
7	Frequency Modify: ON–Available; OFF→Unavailable (Default)
8	Quiet Operation: ON→Available; OFF→Unavailable (Default)

Definition of SW6				
1	2	3	4	Centralized Control
OFF	OFF	OFF	OFF	Address=1
ON	OFF	OFF	OFF	Address=2
----	----	----	----	----------
ON	ON	ON	ON	Address=16

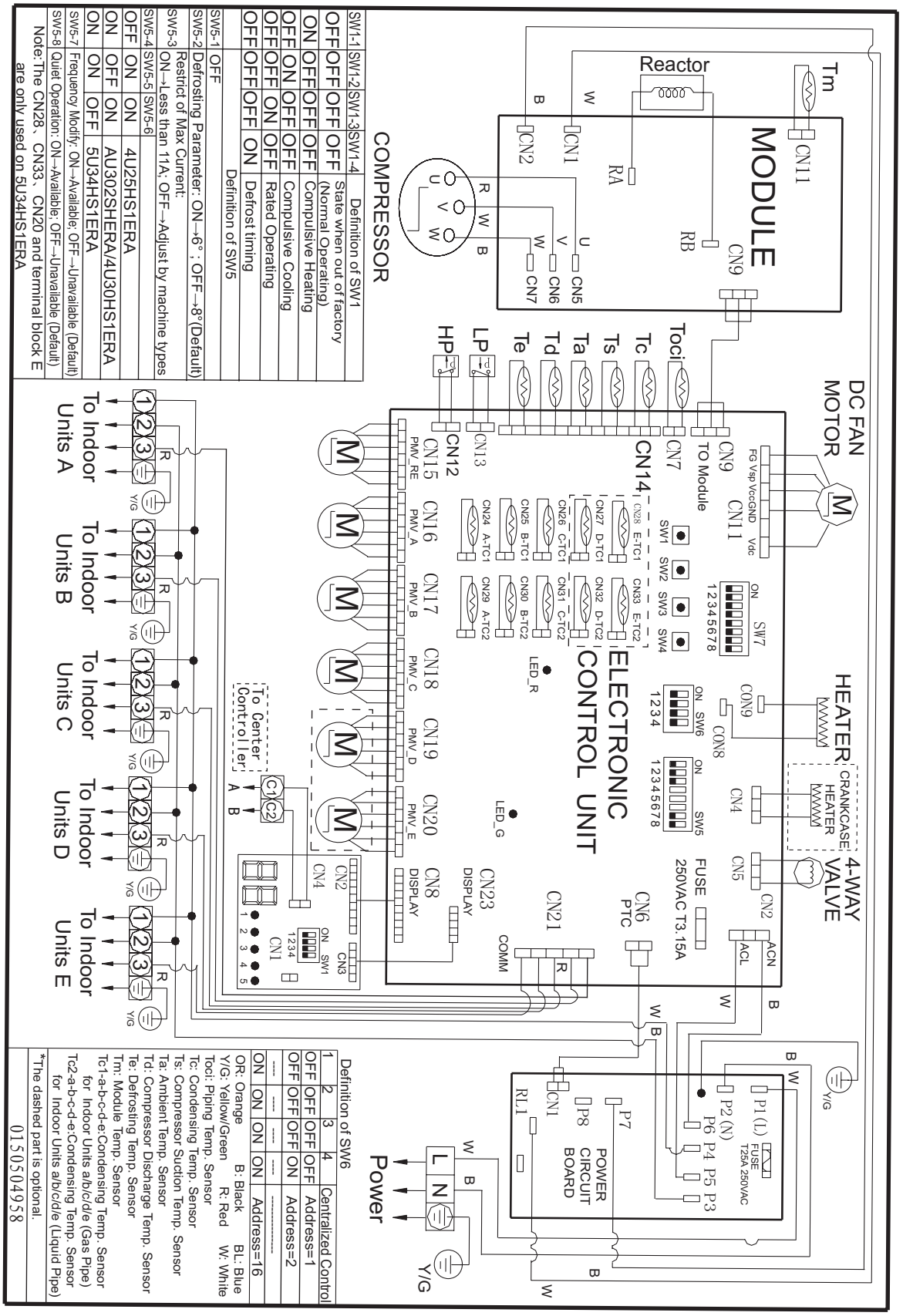
OR: Orange B: Black BL: Blue
Y/G: Yellow/Green R: Red W: White

Tooi: Piping Temp. Sensor
Tc: Condensing Temp. Sensor
Ts: Compressor Suction Temp. Sensor
Ta: Ambient Temp. Sensor
Td: Compressor Discharge Temp. Sensor
Te: Defrosting Temp. Sensor
Tm: Module Temp. Sensor
Tc1-a-b-c:Condensing Temp. Sensor for Indoor Units a/b/c (Gas Pipe)
Tc2-a-b-c:Condensing Temp. Sensor for Indoor Units a/b/c (Liquid Pipe)

*The dashed part is optional.

015050471

YJU4YH025/30BARRA-X YJU5YH034BARRA-X



SW1-1	SW1-2	SW1-3	SW1-4	Definition of SW1
OFF	OFF	OFF	OFF	State when out of factory (Normal Operating)
ON	OFF	OFF	OFF	Compulsive Heating
OFF	ON	OFF	OFF	Compulsive Cooling
OFF	OFF	ON	OFF	Rated Operating
OFF	OFF	OFF	ON	Defrost timing
Definition of SW5				
SW5-1	OFF			
SW5-2	Defrosting Parameter: ON→6°; OFF→8°(Default)			
SW5-3	Restrict of Max Current: ON→Less than 11A; OFF→Adjust by machine types			
SW5-4	SW5-5	SW5-6		
OFF	ON	ON		4U25HS1ERA
ON	OFF	ON		AU302SHERA/4U30HS1ERA
ON	ON	OFF		5U34HS1ERA
SW5-7	Frequency Modify: ON→Available; OFF→Unavailable (Default)			
SW5-8	Quiet Operation: ON→Available; OFF→Unavailable (Default)			

Note: The CN28、CN33、CN20 and terminal block E are only used on 5U34HS1ERA

Definition of SW6				
1	2	3	4	Centralized Control
OFF	OFF	OFF	OFF	Address=1
OFF	OFF	OFF	ON	Address=2
----	----	----	----	----------
ON	ON	ON	ON	Address=16

OR: Orange B: Black BL: Blue
Y/G: Yellow/Green R: Red W: White
Toci: Piping Temp. Sensor
Tc: Condensing Temp. Sensor
Ts: Compressor Suction Temp. Sensor
Ta: Ambient Temp. Sensor
Td: Compressor Discharge Temp. Sensor
Te: Defrosting Temp. Sensor
Tm: Module Temp. Sensor
Tc1-a-b-c-d-e:Condensing Temp. Sensor for Indoor Units a/b/c/d/e (Gas Pipe)
Tc2-a-b-c-d-e:Condensing Temp. Sensor for Indoor Units a/b/c/d/e (Liquid Pipe)

*The dashed part is optional.

015050495 8

5.1.3 Switch setting and functions:

Outdoor main PCB 0151800075

SW5 definition

1	2	3	4	5	6	7	8	definition
ON	---	---	---	---	---	---	---	cooling only
OFF	---	---	---	---	---	---	---	heat pump (default)
---	ON	---	---	---	---	---	---	set ON if frost easily
---	OFF	---	---	---	---	---	---	set OFF if hard to frost(default)
---	---	ON	---	---	---	---	---	Max. running current is 11A
---	---	OFF	---	---	---	---	---	normal control (default)
---	---	---	OFF	OFF	ON	---	---	3U19*
---	---	---	OFF	ON	ON	---	---	4U25*
---	---	---	ON	OFF	ON	---	---	4U30*
---	---	---	ON	ON	OFF	---	---	5U34*
---	---	---	---	---	---	ON	---	temperature correction valid
---	---	---	---	---	---	OFF	---	temperature correction null
---	---	---	---	---	---	---	ON	quiet operation valid
---	---	---	---	---	---	---	OFF	quiet operation null

SW6: outdoor central control address setting

outdoor unit address	indoor unit address				
0000	1	2	3	4	5
1000	6	7	8	9	10
0100	11	12	13	14	15
1100	16	17	18	19	20
0010	21	22	23	24	25
1010	26	27	28	29	30
0110	31	32	33	34	35
1110	36	37	38	39	40
0001	41	42	43	44	45
1001	46	47	48	49	50
0101	51	52	53	54	55
1101	56	57	58	59	60
0011	61	62	63	64	65
1011	66	67	68	69	70
0111	71	72	73	74	75
1111	76	77	78	79	80

Note: "0" means the dip switch is "OFF"; "1" means the dip switch is "ON"

SW7: pre-set dip switch

Small service PCB:0151800076

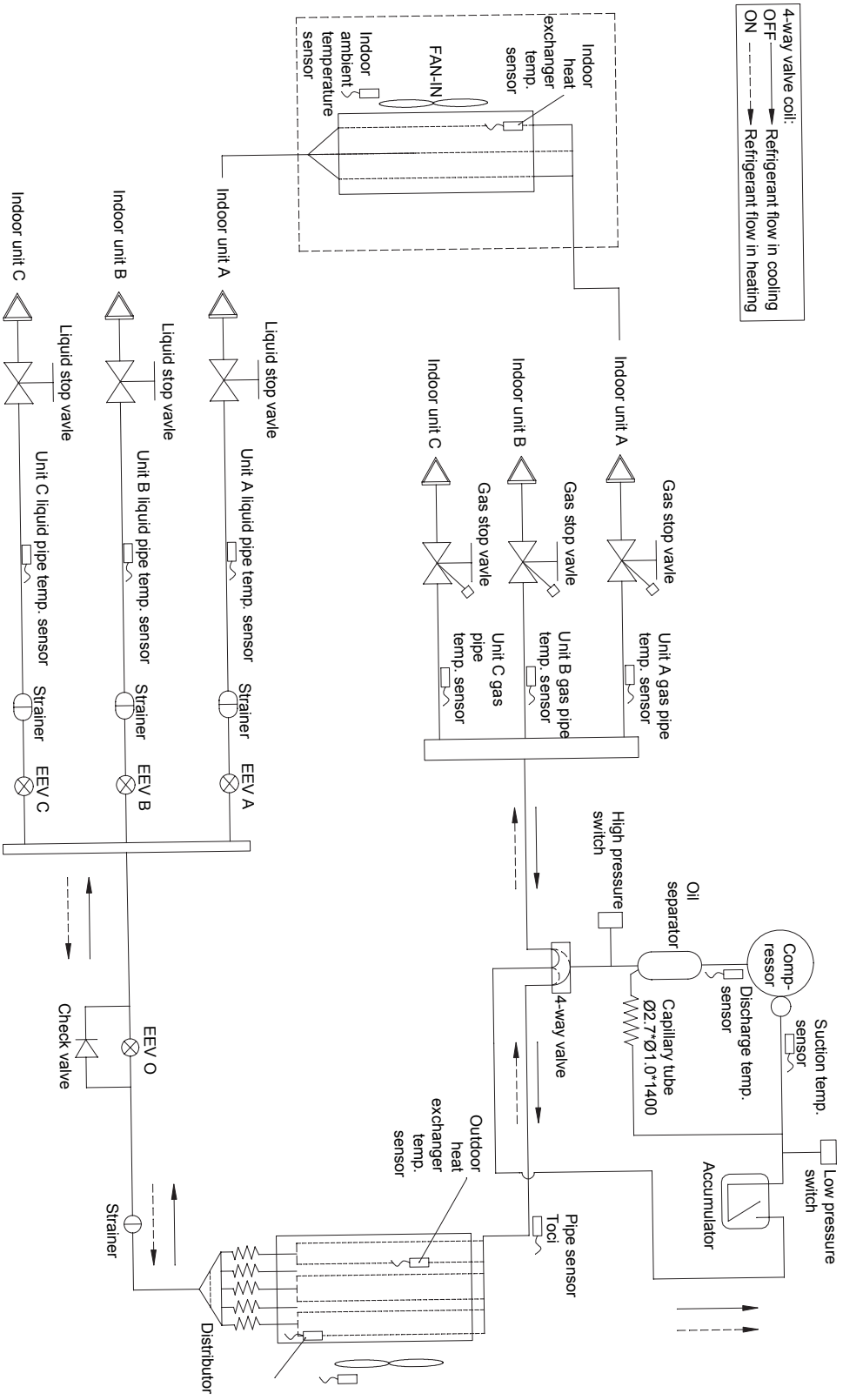
SW1 definition:

1	2	3	4	definition
OFF	OFF	OFF	OFF	state when out of factory
ON	OFF	OFF	OFF	compulsory heating: 50HZ, outdoor motor 5-class, standard open angle 200, the others are normal
OFF	ON	OFF	OFF	compulsory cooling: 60HZ, outdoor motor 7-class, standard open angle 200, the others are normal
OFF	OFF	ON	OFF	rated operation
OFF	OFF	OFF	ON	time defrost valid
ON	ON	ON	ON	detection for wrong wiring

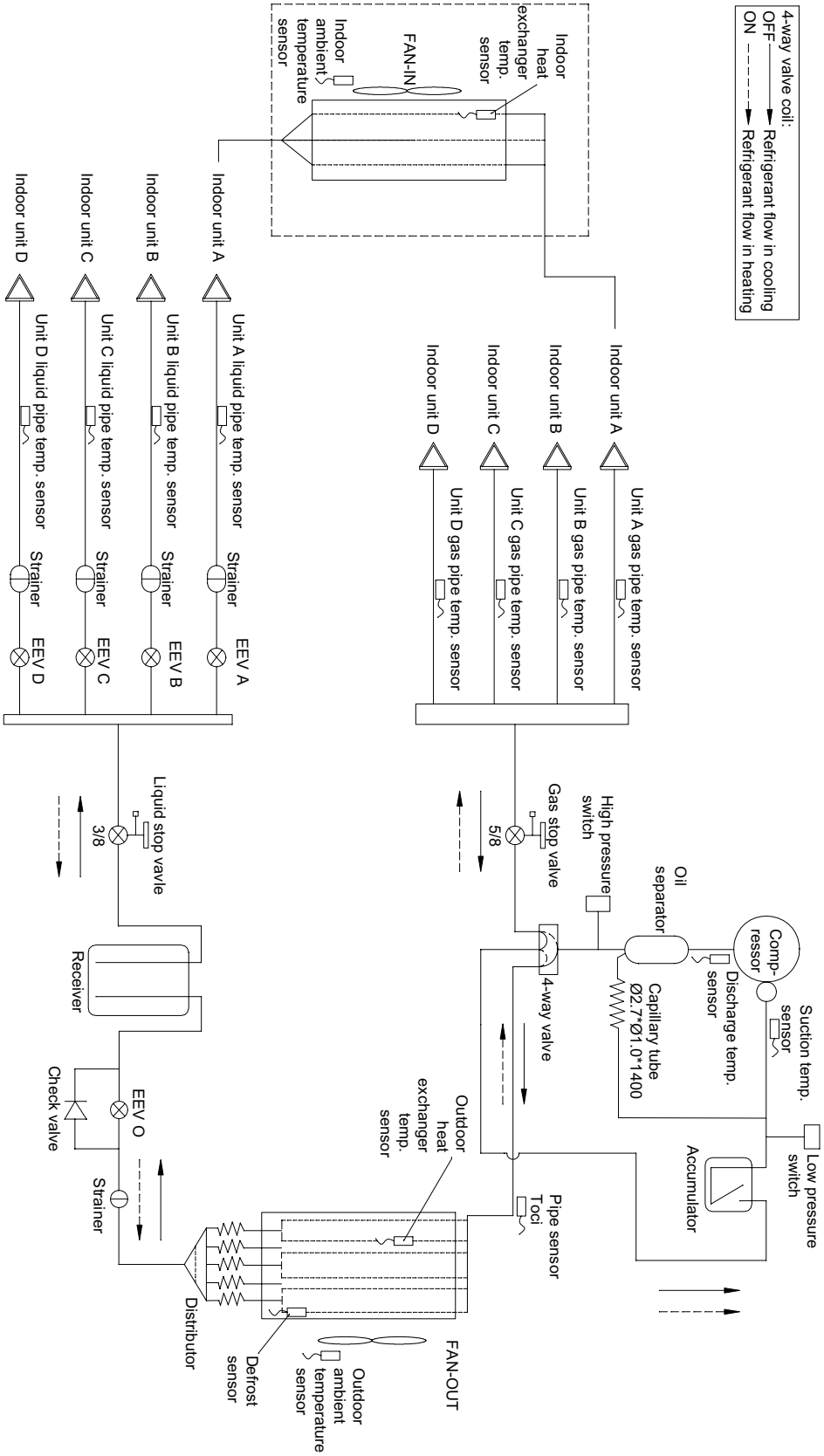
3. Main control functions

3.1 Refrigerant diagram

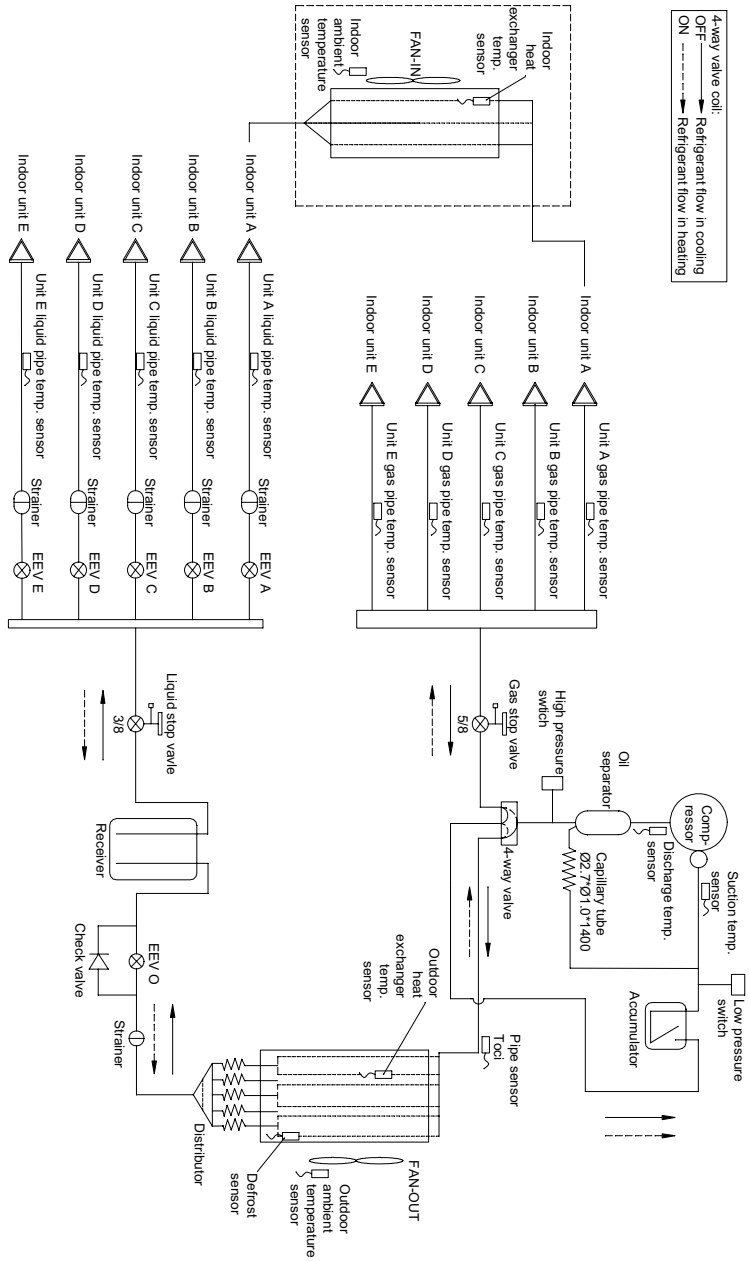
Pipe system for YJU3YH019BARRA-X



Pipe system for YJU4YH025/30BARRA-X



Pipe system for YJU5YH034BARRA-X



3.2 Outdoor frequency control

3.2.1 Compressor running frequency range: 20~95RPS

3.2.2 Defination of high-efficiency operation and its frequency control

In order to meet the cooling request at high ambient temperature and the heating request at low ambient temperature, we set the high-efficiency operation.

Entering condition: cooling mode, Tao≥33℃(E), heating mode, Tao≤5℃(E).

3.3 Electronic expansion valve (EEV) control

3.3.1 Electronic characteristic

Max. open angle	500 pulse
Driving speed	PPS

3.3.2 Initialization of EEV

EEV driving speed: open direction: 32MS; close direction: 32MS

3.3.3 Open angle limitation of EEV

	Unit stop	Adjustable upper limitation	Thermostat ON	Thermostat OFF	Adjustable lower limitation
Cool/dry	5（E）	450（E）	standard open angle+tolerance	5（E）	80（E）
heat	60（E）	450（E）	standard open angle+tolerance	60（E）	80（E）

3.3.4 Standard open angle control

In Cool/Dry mode, standard open angle: outdoor ambient temp.≥20℃, 250 pulse(E);

Outdoor ambient temp.＜20℃, 210 pulse(E);

In Heat mode, standard open angle: outdoor ambient temp.≥10℃, pulse (E);

outdoor ambient temp.＜10℃, 210 pulse (E).

3.3.5 When discharging temp. Td is too high, modify the EEV angle.

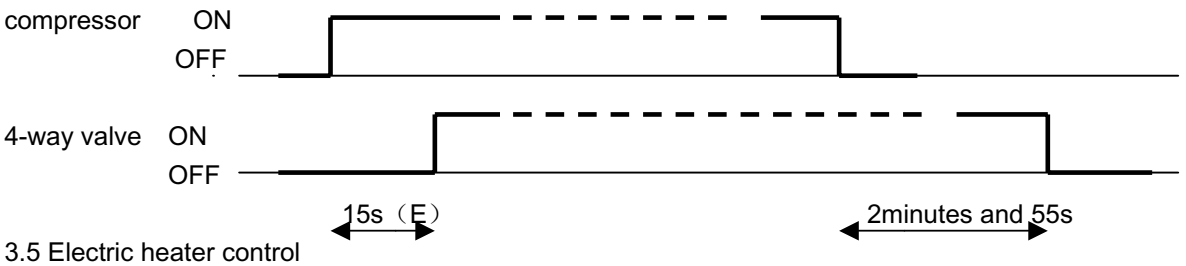
In order to cooperate the compressor discharging temp. over high protection, the system will enlarge the EEV open angle. Within 5 minutes after compressor starts up, it will not modify. The detecting period is 30 seconds.

Cooling mode	**Indoor modification angle**
100℃<discharging temp.	+50degree/30seconds, it will stop until up to the max. permitted opening angle
90℃< discharging temp.<=100℃	Keep the angle
<=90℃	-5degree/30seconds, and reduce to 0 degree gradually
Heating mode	**Indoor modification angle**
100℃< discharging temp.	+50degree/30seconds, it will stop until up to the max. permitted opening angle
90℃< discharging temp.<=100℃	Keep the angle
<=90℃	-5degree/30seconds, and reduce to 0 degree gradually

3.4 4-way valve control in heating

Protection when 4-way valve can not reverse in heating:

10 minutes later after compressor startup, if indoor coil average temp. is below 15degree and keeps for 1 minute, the unit will stop and occur the 4-way valve protection.



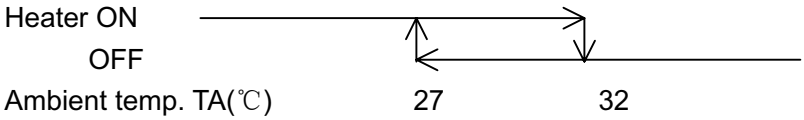
3.5 Electric heater control

If compressor has not run for a long time, the refrigerant will deposit on the bottom of compressor and mix with the refrigeranr oil. When re-startup, because low pressure reduces, refrigerant will be segregated from the refrigerant oil and cause soam in the oil, which will make compressor exhaust a lot of oil. Therefore please stop heating the compressor bottom to ensure the low pressure in startup period should

not go down greatly.

✧ Ambient temp. TA≤27degree, when compressor stops, the electric heater will be electrified.

✧ When TA≥32degree, or compressor running, the electric heater will be off.



3.6 Control of defrosting in heating

In heating mode, defrosting temp. sensor will check the frosting condition of outdoor heat exchanger and make defrosting control.

3.6.1 Enter condition:

①In heating mode, if the compressor has run for 10 minutes continously and run for 45 minutes in all, the system will measure the defrosting temperature sensor Te and outdoor ambient temp. sensor TA, if the below condition can be met for continous 5 minutes, the unit will enter defrosting operation:

$$Te \leq C \times TA - \alpha$$

Herein: C：TA＜0℃，C=0.8　TA≥0℃，C=0.6

According to SW5-2, the setting is as follow: in the place easy to frost, it is H; when out of factory, it is M.

Jumper selection	M(out of factory)	H
α (℃)	8(E)	6(E)

②Defrosting entering condition: $-15℃ \leq C \times TA - \alpha \leq -2℃$

③Stop and Pause condition of compressor running accumulative time in heating mode:

Checking Stop: running operation changes from heating to cooling.

Checking Pause: thermostat OFF, or the unit stops.

3.6.2 Cancel condition:

It will take the max. 10 minutes from beginning defrosting to quit it. Te sensor will measure the condition of outdoor heat exchanger, if the temp. is over 7℃ for 60 seconds in all or is up to 12℃ for 30 seconds in all, the defrosting will be over.

3.6.3 Compulsory defrosting control

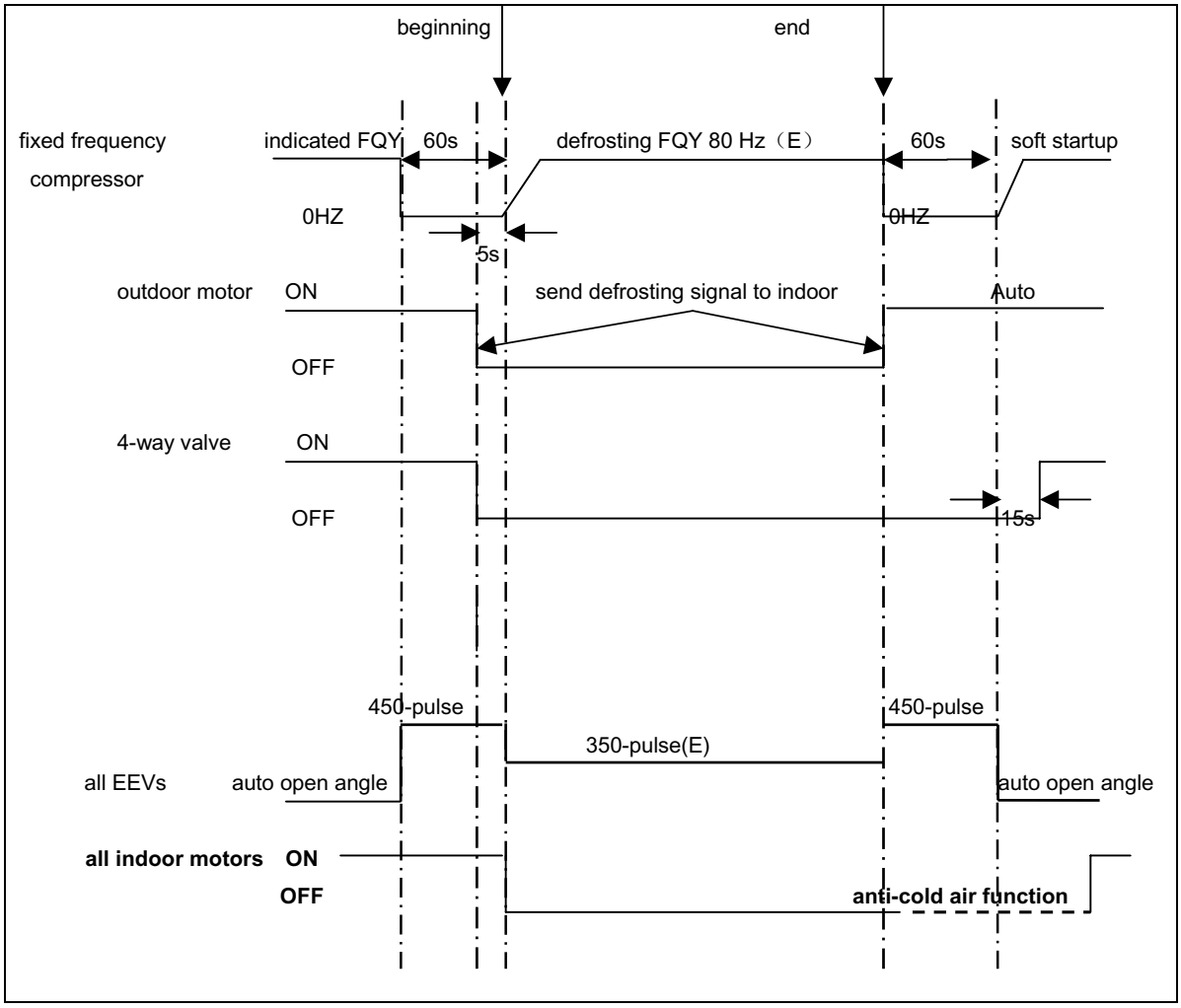
Enter condition: in heating mode, after receiving the compulsory defrosting signal from indoor unit, the unit will perform the compulsory defrosting operation.

Cancel condition: Te≥12℃ and keep for 1 minute or the defrosting time is over 10 minutes.

The manual defrosting signal of indoor unit will remain until the outdoor enters defrosting mode.

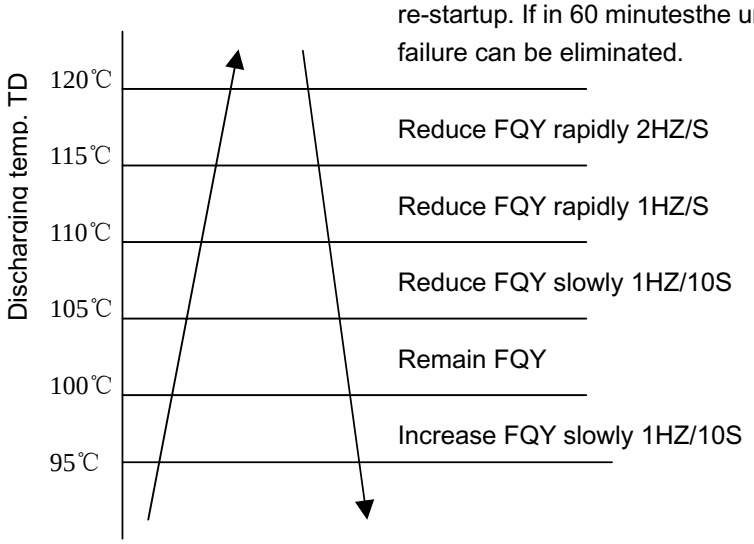
Note: When outdoor compressor not running, the unti still can enter manual defrosting, but it will comply with the 3-minute protection of compressor.

3.6.4 Defrosting operation flow chart

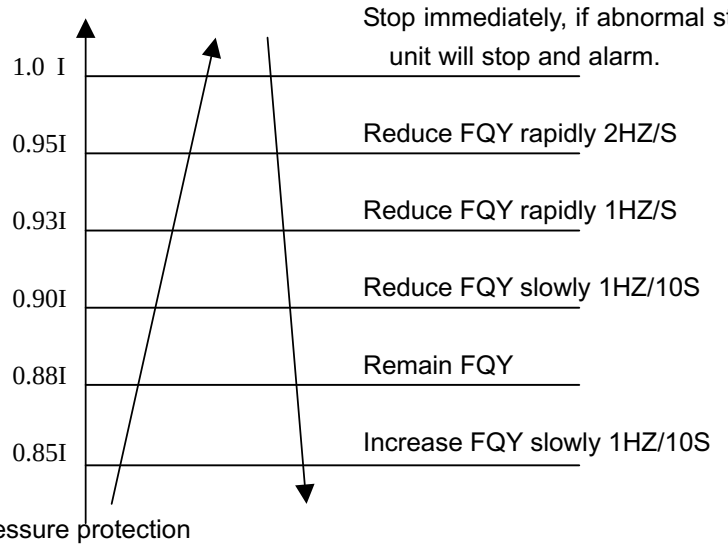


3.7Frequency control when Td is too high

Purpose: make compressor frequency control if the discharging temp. is too high, to lower the discharging temp. efficiently and ensure the system can run normally.



3.8 Frequency control when there is CT over current protection

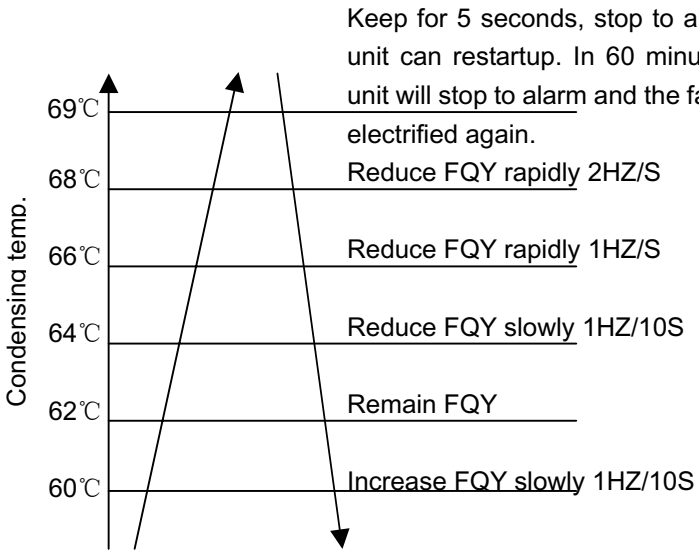


3.9 High pressure protection

When the input signal of pressure switch is high level:1, that shows there is no protection.

When the input signal of pressure switch is low level: 0 for 1 minute, that shows high pressure protection works. At this time, compressor stops, outdoor will send the alarm signal. The alarm can be resumable. If in 60 minutes, the failure occurs 3 times, the failure can be confirmed and send failure code to indoor. Meanwhile, by controling the max. condensate temp. Tc (cooling) or TmAVE (heating), please confirm as follow:

In nominal cooling/dry/heating mode, high pressure can be controlled by limiting the max. frequency.



3.10 Low pressure protection

(1) When compressor is running, if output signal of low pressure switch is low level: 0 for 1 minute continously, compressor will stop,outdoor alarms. The alarm can be resumable. If in 60 minutes, the failure occurs 3 times, the failure can be confirmed and send failure code to indoor.

(2) When compressor no running, if output signal of low pressure switch is low level: 0 for 30 seconds continously, alarm will occur.

• When unit stops, the reason that system still checks the low pressure : in a long time stop, make protection for the compressor on the condition of great refrigerant leakage.

• The reason that low pressure switch action time is 30 seconds: when compressor stops, low pressure does not change, so it will be shorter than the set time in operation.

(3) When compressor starts up, in 8 minutes, low pressure switch signal will be shielded.

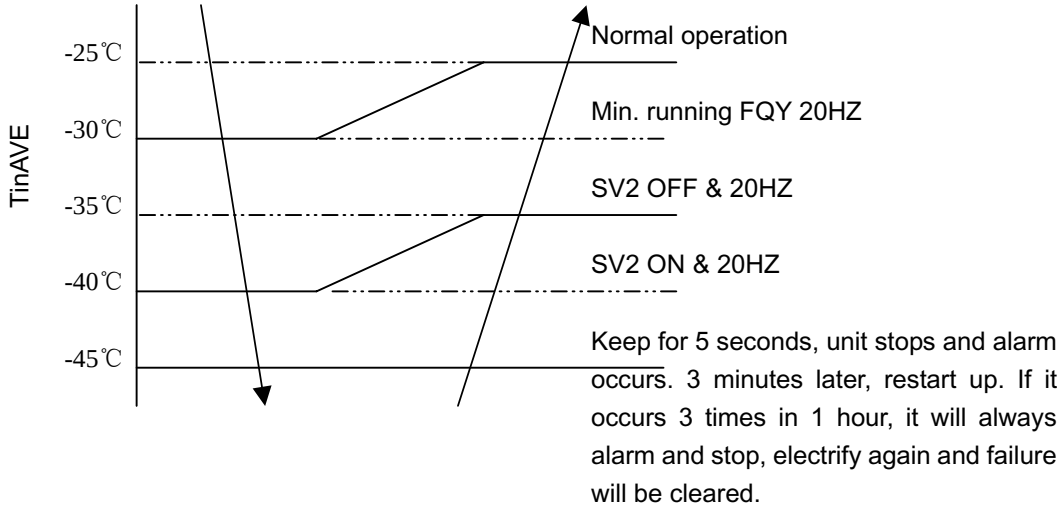
(4) In defrosting, low pressure switch will be shielded.

(5) In oil return procedure, low pressure switch will be shielded.

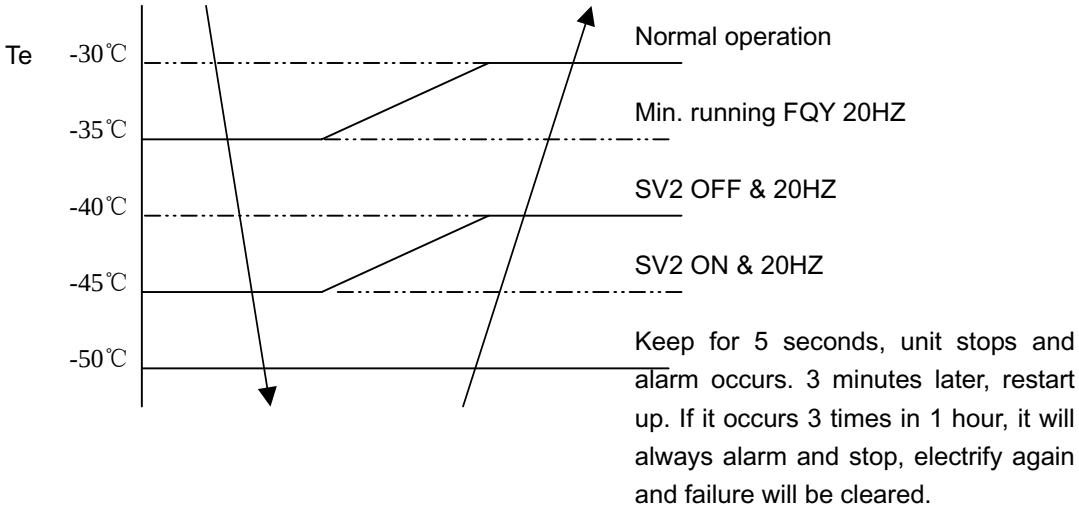
(6) In the refrigerant discharging procedure after the oil return in cooling is over, low pressure switch will be shielded.

In addition, the system will control low pressure through the evaporator temp. TE to realize the low pressure protection function.

In cooling, confirm through Tc2AVE:



In heating, confirm through defrosting temp. Te:



If the failure is not confirmed as the permanent protection, outdoor will not send failure code to indoor, and indoor will not alarm.

3.11 Oil return operation control

3.11.1 Entering condition

When the compressor running frequency is lower than 58Hz (E) continuously for 8 hrs, the system will enter oil return operation. In the course of mode changeover, manual unit stop or protective unit stop, the time will be accumulative. After the compressor restarts up, the time will be counted continuously. In a continuous 8 hrs, if the compressor running frequency is not less than 72Hz for over 10 minutes continuously, the accumulative time will be cleared. Also after the heating defrosting, the time will be cleared.

3.11.2 Procedure

Cooling mode: refer to “the oil return procedure in cooling mode”

Heating mode: refer to “the oil return procedure in heating mode”

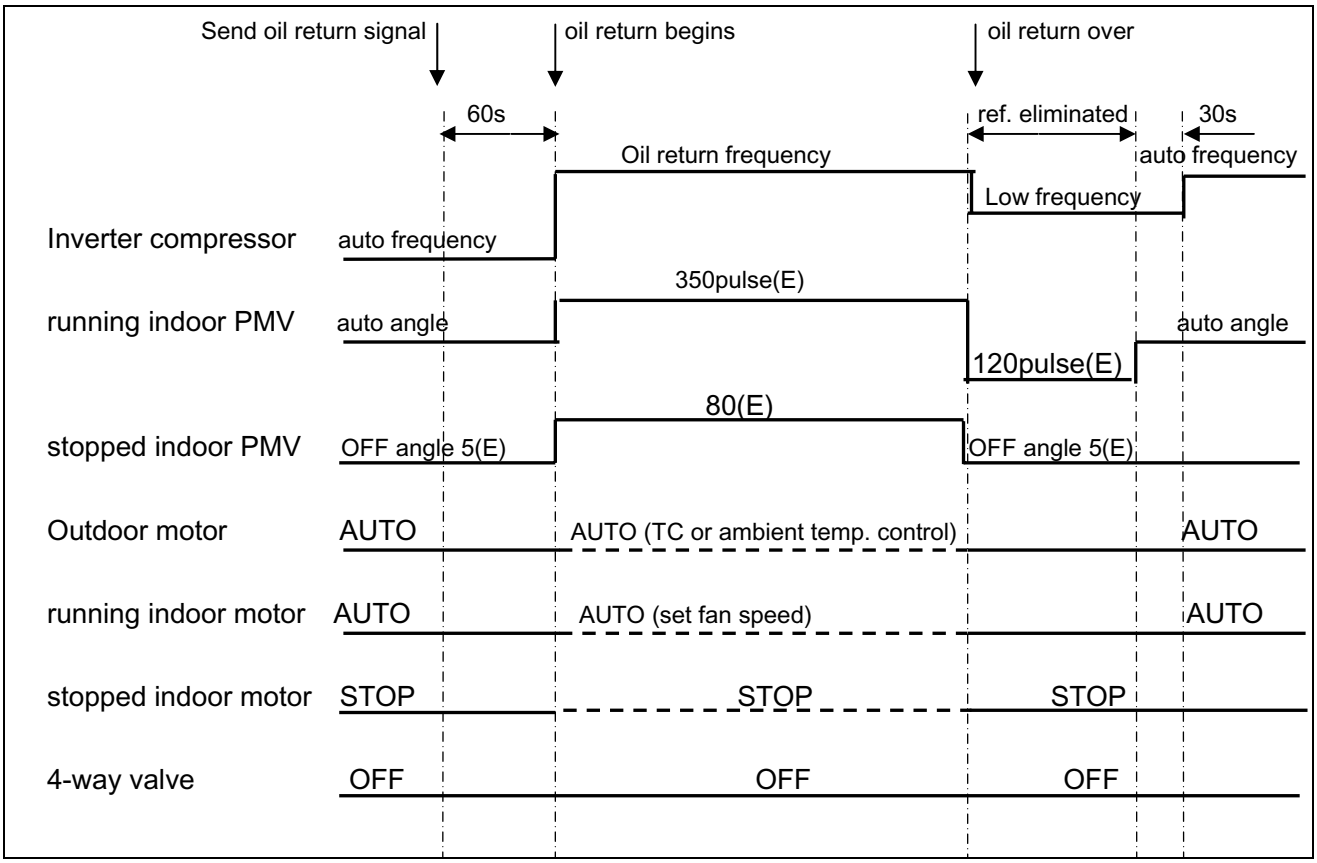
3.11.3 The protection treatment in oil return operation

In the course of oil return, because of protection or abnormal unit stop, after the unit restarts up, the time will not be cleared, the system will need another oil return operation. In the refrigerant flow course in the oil return of cooling mode or after the oil return, and within 5 minutes after the refrigerant being eliminated is over, the anti-freezed protection is invalid, and also the low voltage protection is invalid. But the other protection is valid.

In the course of oil return from heating mode to cooling mode, if abnormal condition occurs or the unit stops for protection, then the system needs not another oil return within 3 minutes after the unit stops and it will start up directly, then to heating mode.

In the course of oil return from heating mode to cooling mode, the anti-freezed protection is null and void, and the low voltage protection is null either. The other protection is valid.

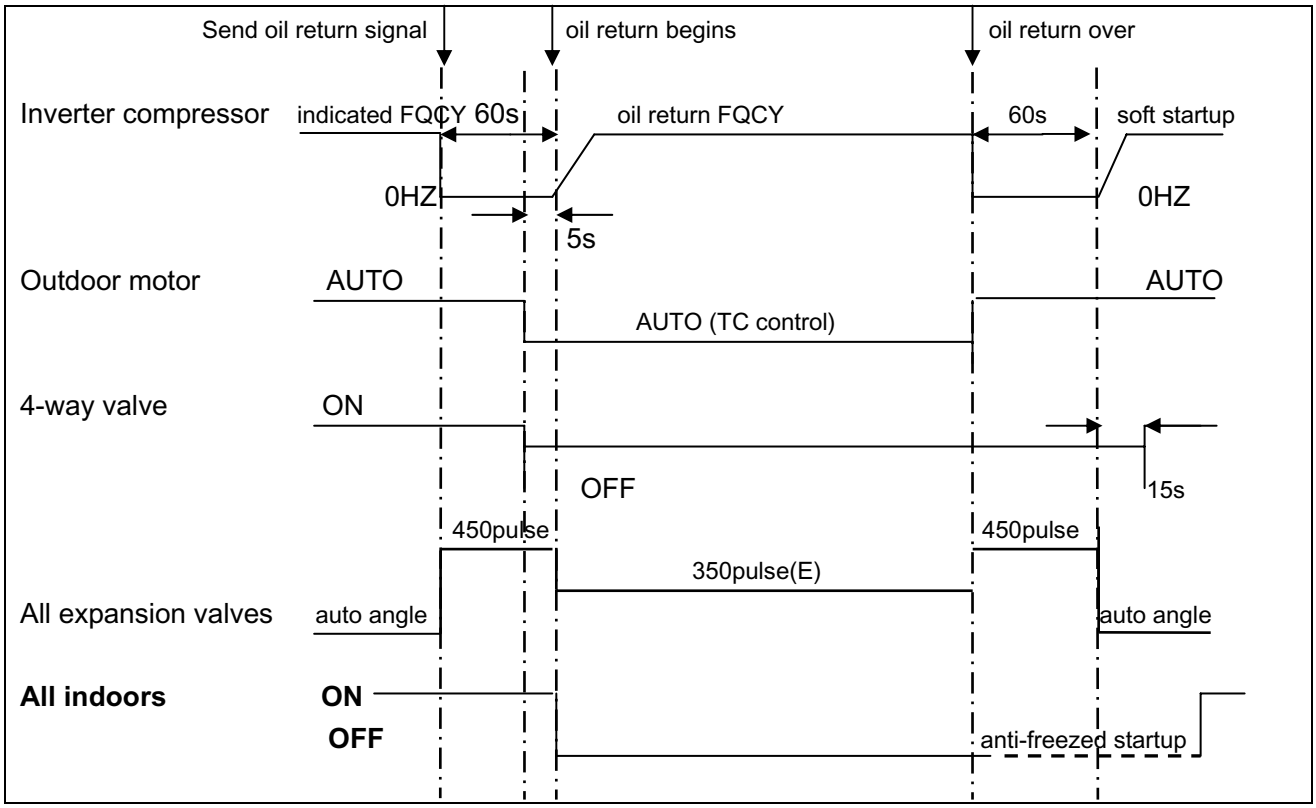
Oil return procedure in cooling mode:



After oil return in cooling mode, the quit condition of refrigerant eliminated:

OR
- & 1 minute later after oil return is over
  - OR Td - Tc＞30℃
  - OR Ts - Tc2AVE＞30℃
  - OR Tc2AVE＜ - 35℃
- Max. 10 minutes

Oil return procedure in heating mode:



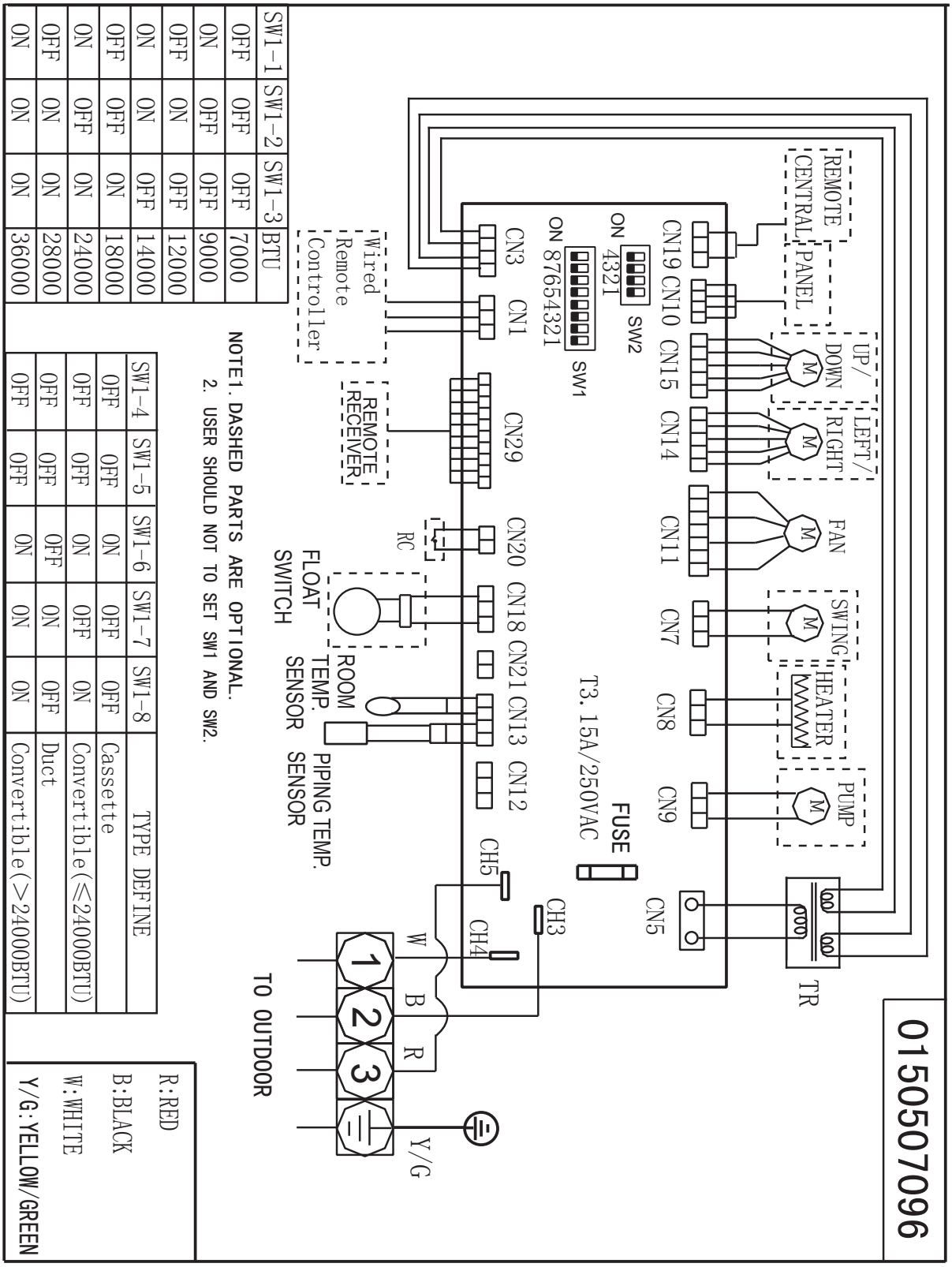
Quit condition of oil return:

OR
- Max. 9 minutes (E)
- & OR Td - Tc＜20℃ for 30s continuously(5 minutes later, begin to count)
- & OR Ts - Tc2AVE＜15℃for 30s continuously(5 minutes later, begin to count)
- & Running for min. 5 minutes(E)

5.2 Indoor unit

5.2.1 Indoor unit PCB photo

5.2.2. Indoor Wiring Diagram



SW1-1	SW1-2	SW1-3	BTU
OFF	OFF	OFF	7000
ON	OFF	OFF	9000
OFF	ON	OFF	12000
ON	ON	OFF	14000
OFF	OFF	ON	18000
ON	OFF	ON	24000
OFF	ON	ON	28000
ON	ON	ON	36000

NOTE1. DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT TO SET SW1 AND SW2.

SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	TYPE DEFINE
OFF	OFF	ON	OFF	OFF	Cassette
OFF	OFF	ON	OFF	ON	Convertible(≤24000BTU)
OFF	OFF	OFF	ON	OFF	Duct
OFF	OFF	OFF	ON	ON	Convertible(>24000BTU)

5.2.5. Electrical Control Functions

1. Dip switch functions:

Indoor unit PCB SW1-1~~SW1-8

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
ON	OFF	OFF	*	*	*	*	*	09 indoor
OFF	ON	OFF	*	*	*	*	*	12 indoor
OFF	OFF	ON	*	*	*	*	*	18 indoor
ON	OFF	ON	*	*	*	*	*	24 indoor
*	*	*	OFF	*	*	*	*	Room card invalid
*	*	*	ON	*	*	*	*	Room card valid
*	*	*	*	OFF	*	*	*	Heat pump
*	*	*	*	ON	*	*	*	Cooling only
*	*	*	*	*	OFF	*	*	Without temperature compensation
*	*	*	*	*	ON	*	*	with temperature compensation
*	*	*	*	*	*	OFF	OFF	Cassette
*	*	*	*	*	*	OFF	ON	2P Convertible
*	*	*	*	*	*	ON	OFF	Duct
*	*	*	*	*	*	ON	ON	5P Convertible

SW2: wiring controller communication address

wiring controller address	SW2-1	SW2-2	SW2-3	SW2-4
master unit	OFF	OFF	OFF	OFF
slave unit 1	ON	OFF	OFF	OFF
slave unit 2	OFF	ON	OFF	OFF
slave unit 3	ON	ON	OFF	OFF
……	……	……	……	……
slave unit 15	ON	ON	ON	ON

when the wiring controller is used to control many units , the wiring controller communication address of indoor unit need be setted

2. Sign definition:

Indoor				outdoor					
Tai	Tc1	Tc2	Tm	Tao	Toci	Tc	Te	Ts	Td
Ambient temp.	Outlet pipe temp.	Inlet pipe temp.	mid coil temp.	Ambient temp.	Thick pipe of heat exchanger	mid condenser temp.	Defrost temp.	Compressor suction temp.	Compressor discharging temp.
Tcomp1,2			Tset						
Temp. compensation			Set temp.						

3. Dry operation

Tai＜16℃, indoor unit stops running and sends stop-unit signal to outdoor.

Tai≤Tset, indoor motor runs at low speed and sends stop-unit signal to outdoor.

4. Fan operation

Indoor fan motor will run as the fan speed set on the remote controller or the wired controller and indoor unit will send the stop-unit signal to outdoor.

5. Auto operation

5.1 If the unit enters Auto mode for the first time, the system will adjust the operation mode according to the room temp. and the set temp.

When Tai≥Tset, entering auto cooling mode;

When Tai＜Tset, entering auto heating mode.

5.2 Auto cooling mode is as the same as the cooling mode. After the thermostat is OFF for 15 minutes, if Tai+ 1+Tcomp2＜Tset, the unit will enter auto heating mode, or the unit will still stay at auto cooling mode and stop when it reaches the set temperature; while the indoor motor will be at low speed.

5.3 Auto heating mode is as the same as the heating mode. After the thermostat is OFF for 15 minutes, if Tai≥Tset+1 +Tcomp1, the unit will enter auto cooling mode, or the unit will still stay at auto heating mode;

5.4 In this mode, the Sleep function is available, run as cooling sleep in cooling mode and as heating sleep in heating mode. Once sleep mode is set, the mode will not change after the unit stops for 15 minutes when it arrives Tset.

5.5 Mode conversion will be confirmed after compressor has stopped for 10 minutes.

6. Abnormal operation

6.1 When outdoor modes from the request of indoor unit conflict, the one entering firstly will take priority.

6.2 After indoor receives the ON command from wired controller, it will firstly confirm the outdoor current operation mode. If they are the same modes, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode and send the “standby” signal to wired controller until outdoor stops or outdoor mode the requested mode of wired controller are the same, the unit will run as the requested mode of wired controller.

6.3 After indoor receives the ON command from remote controller, it will firstly confirm the outdoor current operation mode. If they are the same mode, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode. After setting on remote controller, if the buzzer sounds two times, that shows abnormal operation. Indoor will run until the outdoor mode and the requested mode of remote controller are the same.

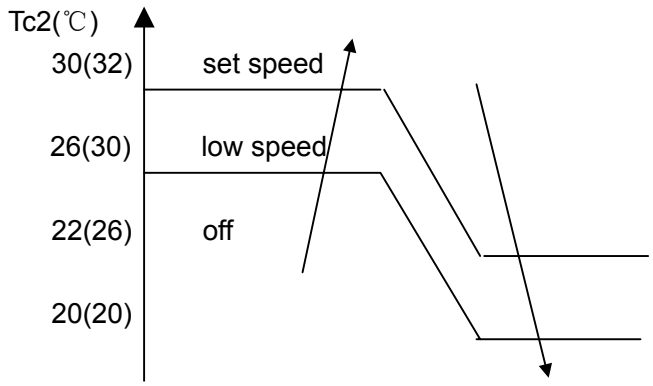
6.4 In AUTO mode, when the indoor unit occurs abnormal operation, the indoor unit will keep OFF state, and the buzzer will not sound until the outdoor mode and the requested mode of indoor unit are the same.
6.5 COOL (included AUTO COOL), DRY, FAN are not abnormal mode.
6.6 HEAT and FAN are not abnormal mode.

7. Control for discontinuous operation

After the unit starts up in cooling/heating mode, in 5 minutes, the compressor run/stop will not be controlled by the room temp., but after changing the set temp., if compressor stop condition can be met, the system will stop compressor immediately.

8. Anti-cold air control

In heating mode, after compressor startup, the system will control indoor fan motor according to indoor coil temperature. Detailed operation is as below:



Note:
1) The data in the parentheses is the control point when Tao>10℃;
2) Indoor unit will send “pre-heat” signal to wired controller in anti-cold air period.

9. Fan motor control in defrosting

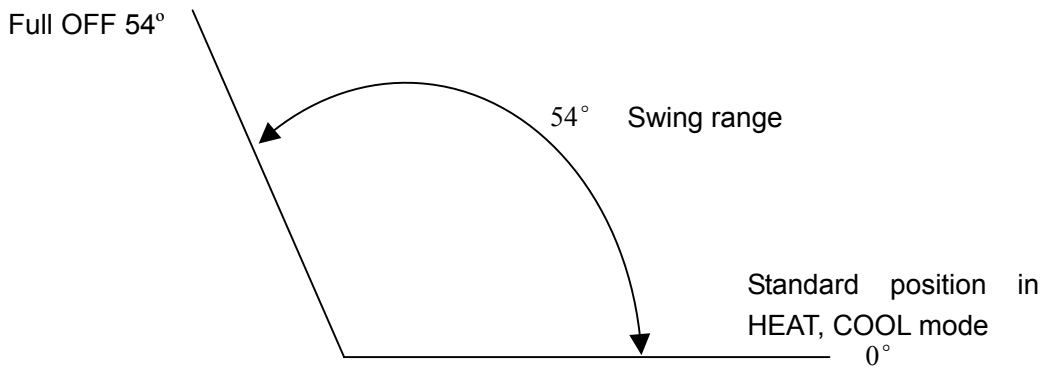
9.1 On receiving outdoor defrosting signal, indoor unit will stop after blowing remaining heat at slow speed for 20 seconds.
9.2 In defrosting period, indoor fan motor stops running.
9.3 Defrosting is over, and indoor motor will run as anti-cold air state.

10. Blowing remaining heat operation

When the unit shuts off in heating mode or the thermostat is OFF, indoor motor will stop running after running at low speed for 30 seconds.

11. Swing motor control

Indoor unit will control the swing motor according to the swing signal from the wired controller.



12. Water pump control

12.1 Water pump will be electrified when indoor unit enters non-heating mode until indoor unit stops. 5 minutes later after indoor unit stops, water pump will stop.

12.2 When indoor unit is in heating mode, water pump will not operate.

12.3 In OFF state and in any mode, once float switch signal is measured, indoor unit will send OFF signal to outdoor and send the failure code of drainage system to the wired controller, then the water pump will work until the float switch signal is cancelled. After water pump is forced to run for 5 minutes, indoor unit will be back to normal state.

13. Compulsory defrosting operation

13.1 After indoor receives the compulsory defrosting signal, it will send continously the signal to outdoor for 10 times, in this period, indoor unit will work normally and it will enter defrosting operation until it receives the enter-defrost signal from outdoor unit.

13.2 Wired control type: In heating mode, make a jumper for D2 to enter compulsory defrosting.

13.3 Remote control type: In heating mode, high speed, 30℃, press SLEEP button 6 times, and the buzzer will sound 3 times, then enter the manual defrosting.

14. Trial operation

14.1 Enter condition

A. Wired control type: In OFF state of COOL or HEAT mode, press ON/OFF button for over 5 seconds to enter the cooling or heating trial operation;
B. Remote control type: In OFF state, keep pressing ON/OFF button until 5 seconds later, the buzzer sounds twice, then enter the cooling or heating trial operation;

14.2 Response in trial operation

A. Cooling trial operation: indoor sends S-CODE=SD to outdoor, indoor: at high speed, set temp: 16℃;
B. Heating trial operation: indoor sends S-CODE=SF to outdoor, indoor: at high speed, set temp: 30℃;
C. In this period, anti-freezed and overheat functions are invalid.

14.3 Quit condition

A. Receiving the signal of cancelling trial operation from wired controller or remote controller;
B. After trial operation has run for 20 minutes, it will quit trial operation automatically and enter the normal mode with the set temp.: 24℃.

15. Timer operation

15.1 Wired control type: wired controller will control the unit ON/OFF;

15.2 Remote control type: indoor unit will confirm the unit ON or OFF according to the current clock and the timer clock set by remote controller. When setting timer function, the timer LED will be ON.

16. SLEEP function

16.1 Wired control type unit is without sleep function;

16.2 Remote control type unit consists of cooling sleep and heating sleep, after the sleep is set, the unit will change mode; the sleep will begin to count.

A. In cooling/dry mode, after running for 1 hour, the set temp. will increase 1℃, another 1 hour later, the set temp. will increase 1℃ again, then 6 hours (or set time-2) later , it will stop.
B. In heating mode, after running for 1 hour, the set temp. will reduce 2℃, another 1 hour later, the set temp. will reduce 2℃ again, then 3 hours later, the set temp. will increase 1℃, and another 3 hours(or set time-5), it will stop.
C. When setting sleep function, indoor motor is forced at low speed.

17. Healthy negative ion function

When receiving the healthy signal from the wired controller or remote controller, if fan motor is running, the negative ion will work;

If the fan motor stops, the negative ion generator will stop.

18. Auto-restart function

18.1 Wired control type: jumper J07 at high level, auto-restart is available, if at low level, auto-restart is cancelled; when out of factory, the unit is with auto-restart function.

18.2 Remote control type: In 5 seconds, press SLEEP button(press SWING if without SLEEP button) 10 times continuously, the buzzer will sound 4 times and enter auto-restart function. In 5 seconds, press SLEEP 10 times continuously, the buzzer will sound twice and quit auto-restart function.

18.3 Memory information: ON/OFF state, mode, fan speed, set temp., health, swing position;

18.4 If the memory includes timer or sleep function, when being electrified again, timer and sleep will be cancelled;

18.5 If the memory includes auto mode, when the jumper shows cooling only type, auto mode will change to cooling mode.

19. Room card function

The unit adopts room card function(220VAC input), which only make ON/OFF control. When it is connected, the unit is ON; when it is disconnected, the unit is OFF, and the other parameters will be as default or the data in memory.

19.1 When room card function is available

The central control, remote control/wired control and the room card are “AND” logical relationship. On the condition that the room card is connected, the unit can be controlled by remote controller or wired controller; indoor unit will run at the set state by the central controller, remote controller or wired controller; otherwise, if room card is not connected, the unit can not be controlled.

19.2 When room card function is not available

The unit will be controlled by the remote controller, the wired controller or the central controller.

20. Setting method of temperature compensation Tcomp

A. Wired control type unit: this function is not available

B. Remote control type unit:

In cooling or heating mode, there is always with the temp. compensation.

In heating mode: In 24℃ heating mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=the current set temp. - 24℃. For example, if the set temp. is 24℃, the temp. compensation is 0℃; if the set temp. is 25℃, the temp. compensation is 1℃. The max. compensation temp. is 6℃ (the set temp. is 30℃). If you want to cancel it, set the temp. as 24℃.

In cooling mode: In 24℃ cooling mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=24℃-the current set temp. . For example, if the set temp. is 24℃, the temp. compensation is 0℃; if the set temp. is 23℃, the temp. compensation is -1℃. The max. compensation temp. is -8℃ (the set temp. is 16℃). If you want to cancel it, set the temp. as 24℃.

So the temp. compensation range is +8℃~-6℃.

21. Anti-freezed protection

When compressor has run for over 5 minutes, to prevent indoor evaporator freezing (in cooling/dry mode), if indoor mid-coil temp. is below -1 degree for over 5 minutes, indoor EEV will close, and compressor will stop. When indoor mid-coil temp. is over about 10 degree, the unit will be normal.

22. Overload protection in heating mode

It is valid only in heating mode, if indoor mid-coil temp. is over about 65 degree continuously for 10 seconds, indoor will stop; while when indoor mid-coil temp. is below 52 degree for 3 seconds, indoor will resume.

6. Diagnostic code and trouble shooting

6.1.1. Diagnostic code for outdoor unit

PRODUCT DIAGNOSIS PROCEDURE

Diagnosis display on Digital LED

Malfunction Code	Diagnosis	Malfunction Code	Diagnosis
1	Faulty of outdoor unit EEPROM	34	Malfunction of gas pipe temp. sensor for indoor unit C
2	IPM overcurrent or short circuit	35	Malfunction of gas pipe temp. sensor for indoor unit D
4	Communication failure between Module and ECU Communication cables broken or not well connected.	36	Malfunction of gas pipe temp. sensor for indoor unit E
5	Module operated overload	38	Malfunction of module temp.sensor
6	Module low or high DC voltage (under 192V or above 375V)	39	Malfunction of condensing temp. sensor
8	Discharging temperature overheating.Lack of refrigerant, ambient temperature too high or PMVs blocked.	40	Malfunction of liquid pipe temp. sensor for indoor unit E
9	Malfunction of the DC fan motor	41	Malfunction of piping temp. sensor
10	Malfunction of defrosting temp. sensor	42	System high pressure switch off
11	Malfunction of compressor suction temp. sensor	43	System low pressure switch off
12	Malfunction of ambient temp. sensor	44	System high pressure protection.Refrigerant overabundance,High condensing temp. or malfunction of fan motor.
13	Malfunction of compressor discharge temp. sensor		
15	Communication failure between indoor&outdoor unit	45	System low pressure protection.Refrigerant shortage, Low defrosting temp., or malfunction of fan motor.
17	4-way valve switching failure		
18	Module overcurrent / Module switch failure	46	Malfunction of module temp.sensor
20	Indoor overload		
21	Indoor frosted		
23	Module temperature too high (Overload Protecter)		
24	Compressor overcurrent		
25	Input overcurrent		
26	MCU reset		
27	Module current detect circuit malfunction		
28	Malfunction of liquid pipe temp. sensor for indoor unit A		
29	Malfunction of liquid pipe temp. sensor for indoor unit B		
30	Malfunction of liquid pipe temp. sensor for indoor unit C		
31	Malfunction of liquid pipe temp. sensor for indoor unit D		
32	Malfunction of gas pipe temp. sensor for indoor unit A		
33	Malfunction of gas pipe temp. sensor for indoor unit B		

Definition of SW1 on Malfunction Display

1	2	3	4	Definition
OFF	OFF	OFF	OFF	State when out of factory (Normal Operating)
ON	OFF	OFF	OFF	Compulsive Heating:Frequency 50HZ; PMV 200 pulse;Class 5 of outdoor fan motor.
OFF	ON	OFF	OFF	Compulsive Cooling:Frequency 60HZ; PMV 200 pulse;Class 7 of outdoor fan motor.
OFF	OFF	ON	OFF	Rated Operating

Precautions For Adding Refrigerant

1.This system must use refrigerant R410A.
2.Add refrigerant 20g per meter when the total piping length exceeds the standard value,but make sure that the total liquid piping length should be less than the max value.

Notes:

1.When using this product,you need not to set the address.But the L/N wires between indoor & outdoor units must be corresponded,or there will be communication failure.
2.Quiet Operation Setting.Set the DIP "8" to ON position of SW5,the system will run with lower noise,but the max capacity will also reduce slightly.
3.Do NOT change the settings of other switchs,wrong settings can make the system damage or other malfunctions.
4.For some malfunctions, this system can make back up running.

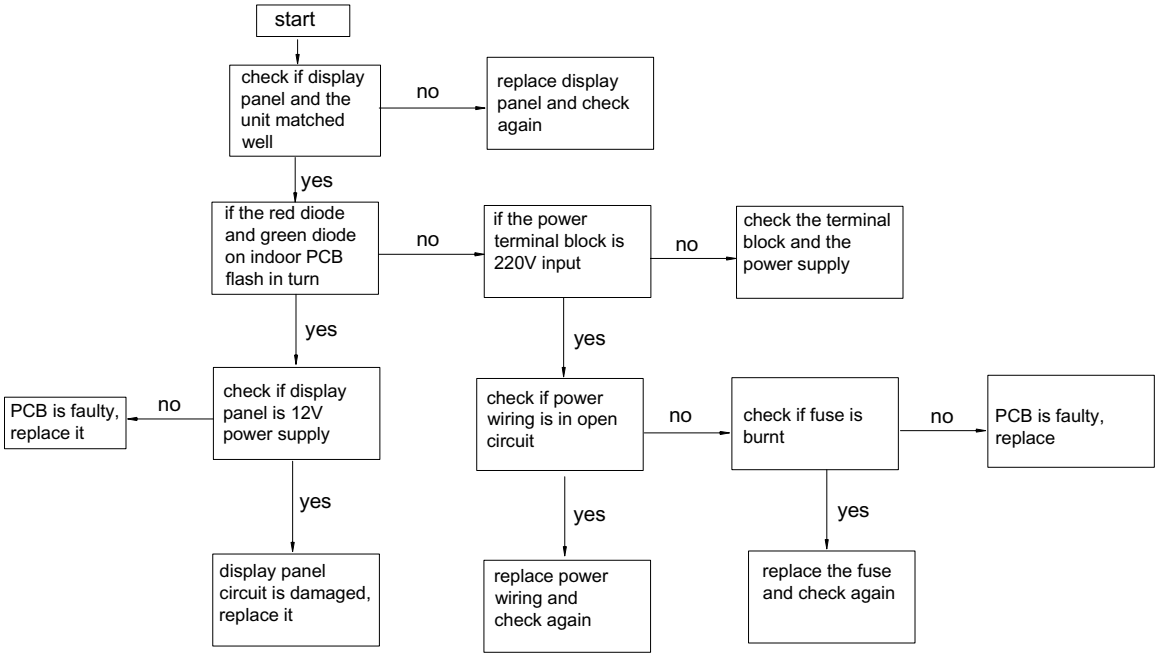
* ECU:Electronic Control Unit
MCU:Micro Control Unit
PMV:Pulse Modulated Valve

6.1.2. Diagnostic code for indoor unit

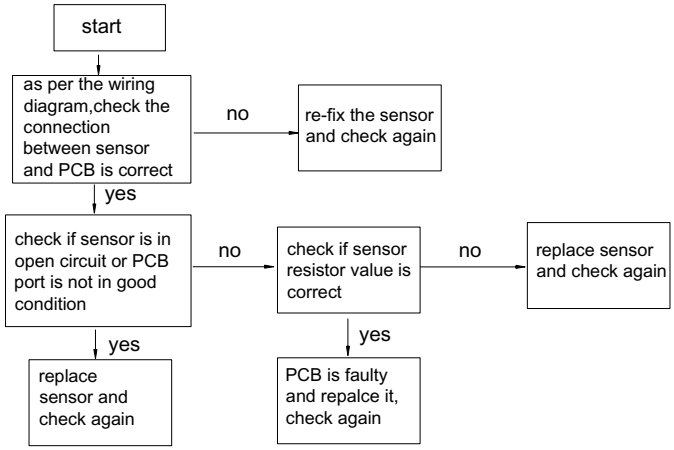
No.	failure description	indoor running LED flash times
1	ambient temperature sensor failure	1
2	coil temperature sensor failure	2
3	EEPROM failure	4
4	communication failure between indoor and outdoor	7
5	communication failure between indoor and wired controller	8
6	drainage failure	12
7	current detecting at 0 point	13
8	assistant coil temperature sensor failure	15
9	outdoor failure	indoor timer LED flash

6.2. Trouble Shooting:

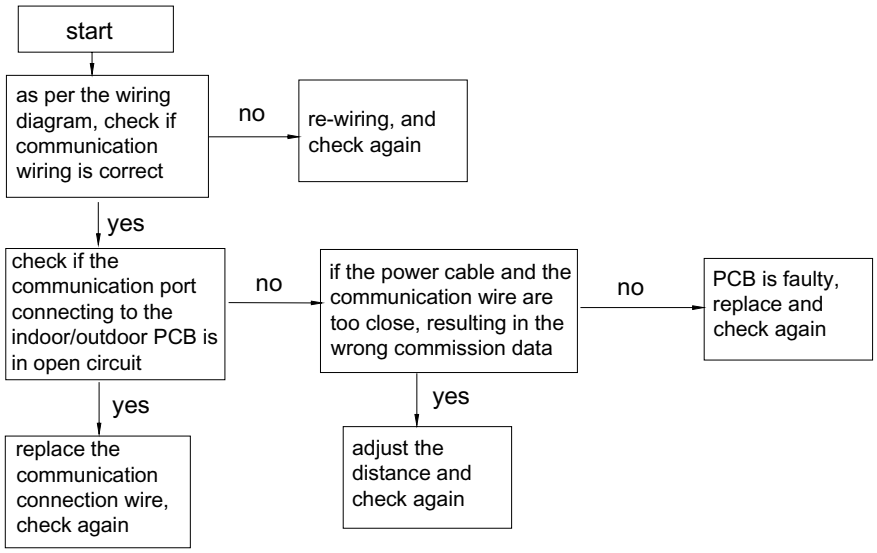
Trouble 1: No display on the operation panel



Trouble 2: Sensor failure



Trouble 3: Communication failure between indoor and outdoor



Trouble 4: Indoor PCB EEPROM data is wrong

1.If the failure occurs when being electrified for the first time, that shows EEPROM（8-bit pin) not fixed firmly or damaged.

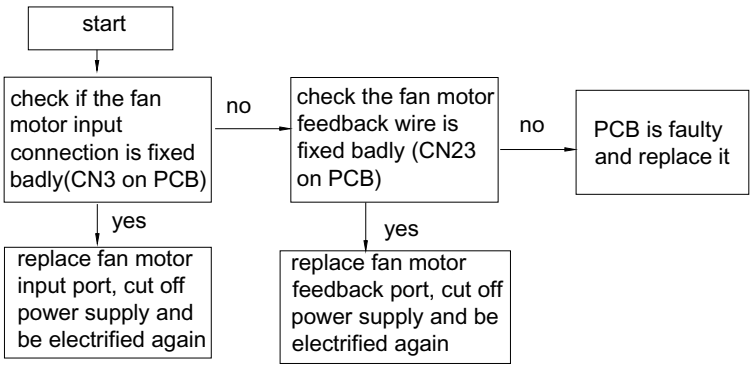
2.If the failure occurs when running, that shows EEPROM is faulty and need to be replaced.

Trouble 5: Indoor repeated unit number

1.Firstly query the unit number: switch off the unit, press SLEEP for about 15 seconds until the buzzer sounds 5 times, on the display panel there will be digit, which is indoor number. By this method,you can check if there is repeated unit number, if yes, please re-set the number as per the unit number setting procedure.

2.Re-set the unit number directly, the unit with outdoor pipe A is No. 1; the unit with outdoor pipe B is No. 2; the unit with pipe C is No.3

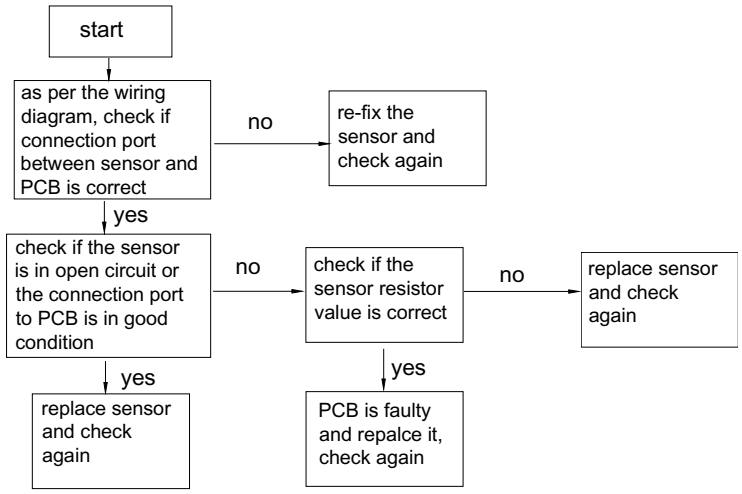
Trouble 6: Indoor fan motor failure, AC fan motor has not 50Hz zero-crossing detection



Trouble 7: Outdoor unit failure

Check the failure code on outdoor indicator board (5-lamp)

Trouble 8: Outdoor unit alarms sensor failure



Trouble 9: AC current over current protection or current transducer damaged, or compressor blocked rotor, compressor great vibration, compressor abnormal startup, state detecting curcuit abnormal or compressor damaged.

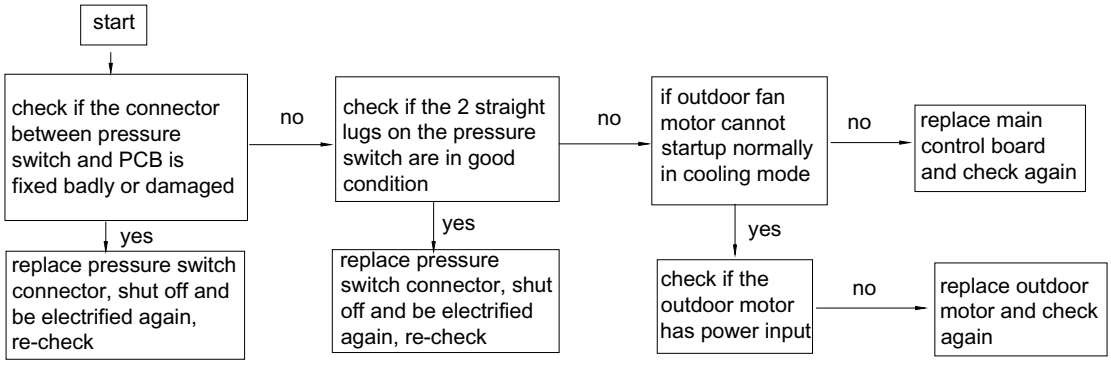
The former twice failure can be resumed automatically, if outdoor board occurs this failure always, and can not be resumed for a long time, that shows:

1. Power module (SPDU) damaged, please replace the power module, then re-wiring as per the wiring diagram (70% possibility)
2. Short circuit in power board results in the power module damaged (15％ possibility)
3. Damaged compressor results in this failure (10％ possibility)
4. Main control board is faulty, replace it (5％ possibility)

Trouble 10: High pressure failure

Reasons:

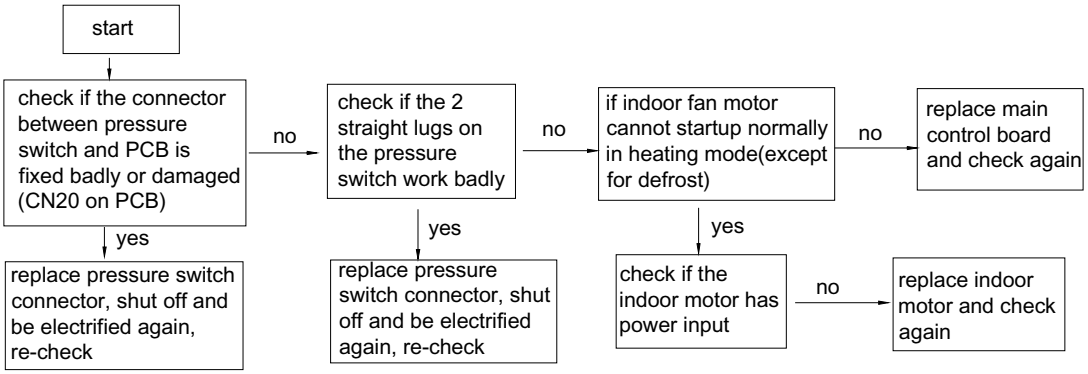
1. Over high system pressure results that the unit stop, and the compressor protection will work. The failure can be resumed.
2. Pressure switch wire is not fixed well or in open circuit.



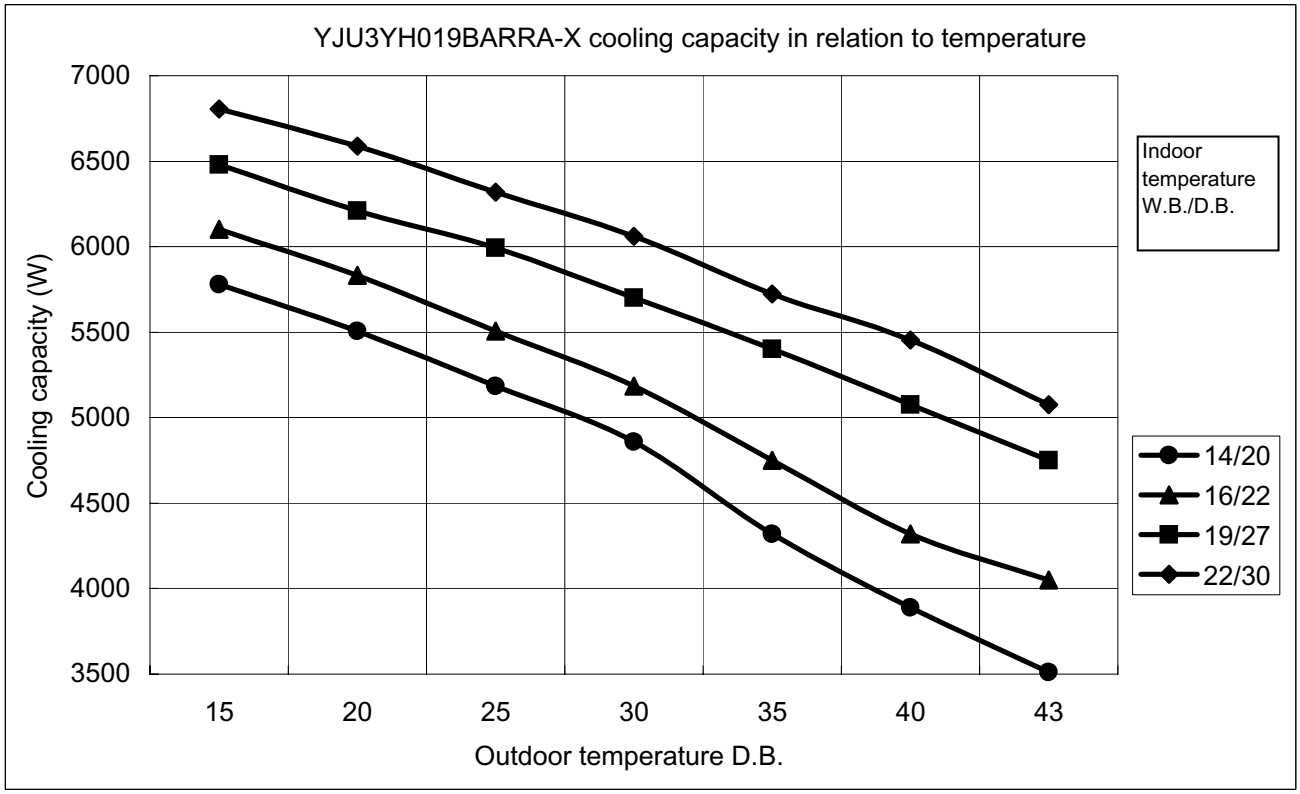
Failure 11: Low pressure switch failure

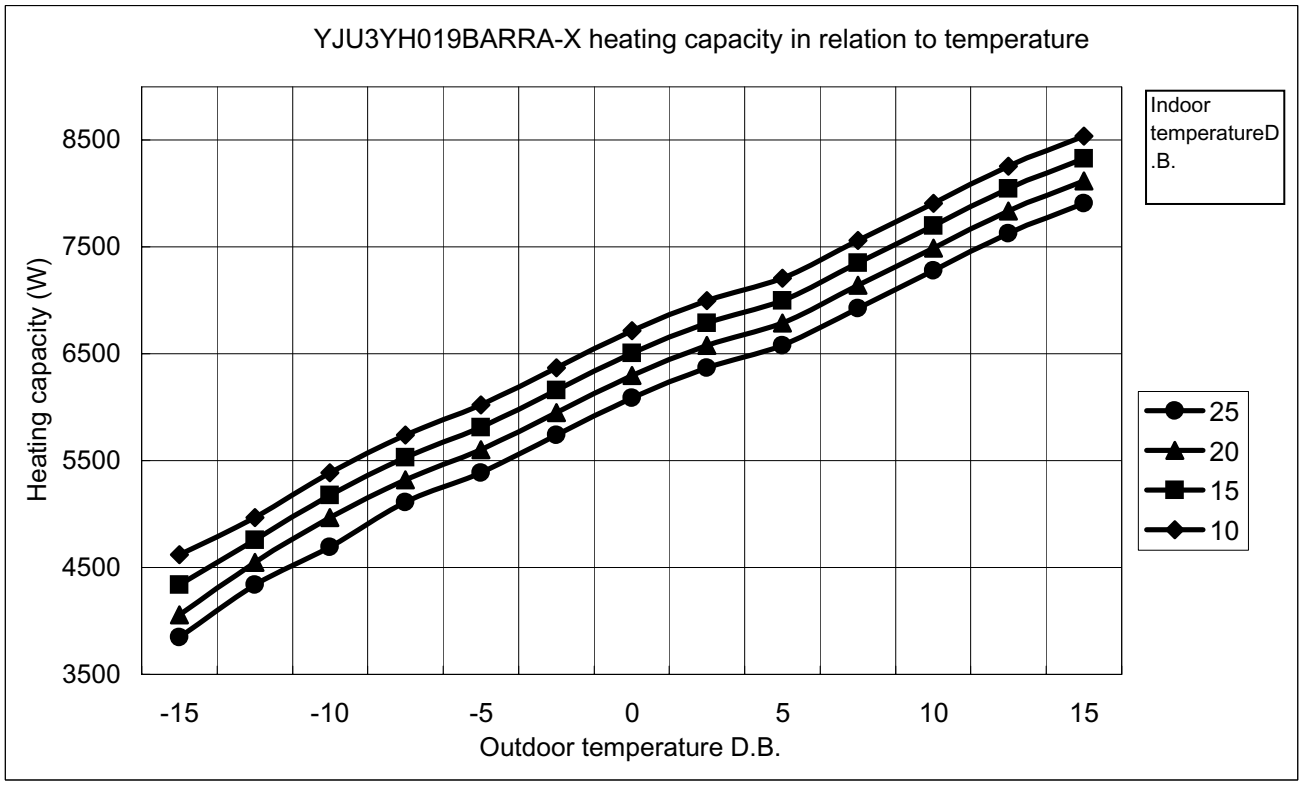
Reason: 1. Too low system pressure causes that the unit stops and the compressor protection works, the failure can be resumed.

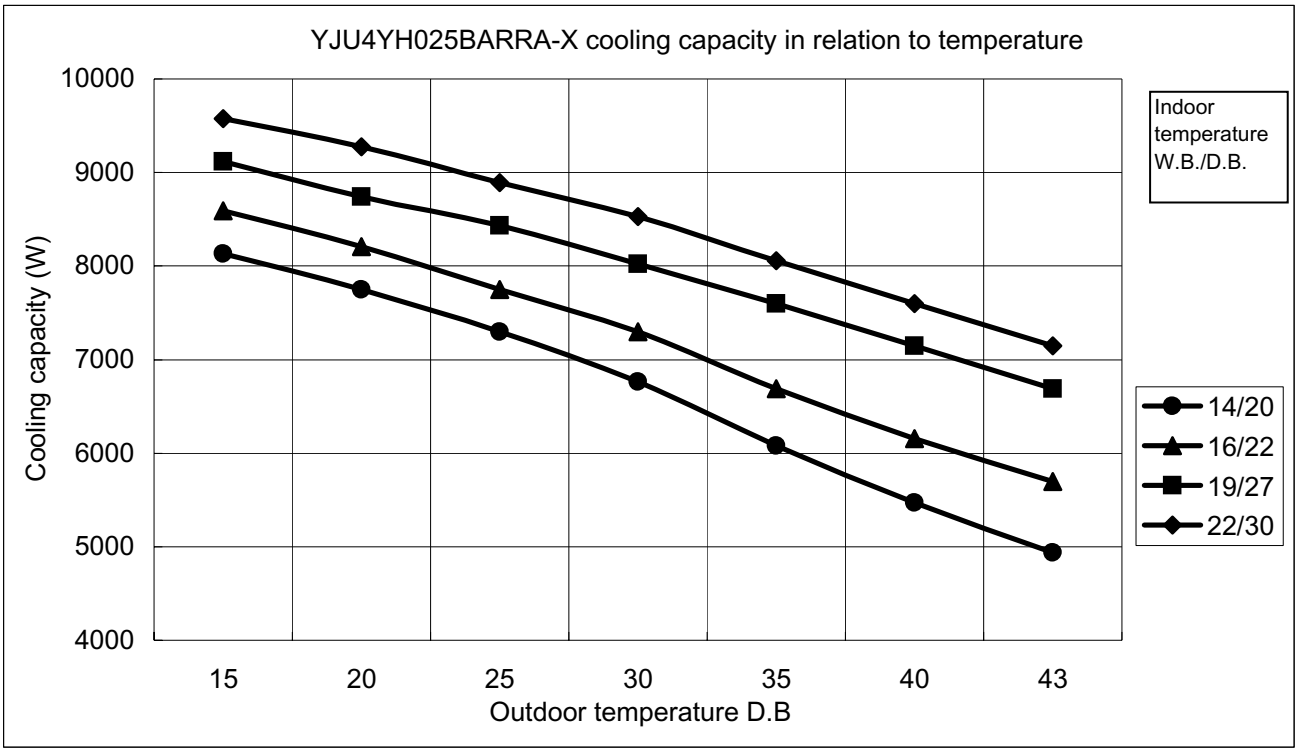
2. Pressure switch wire is not fixed well or in open circuit.

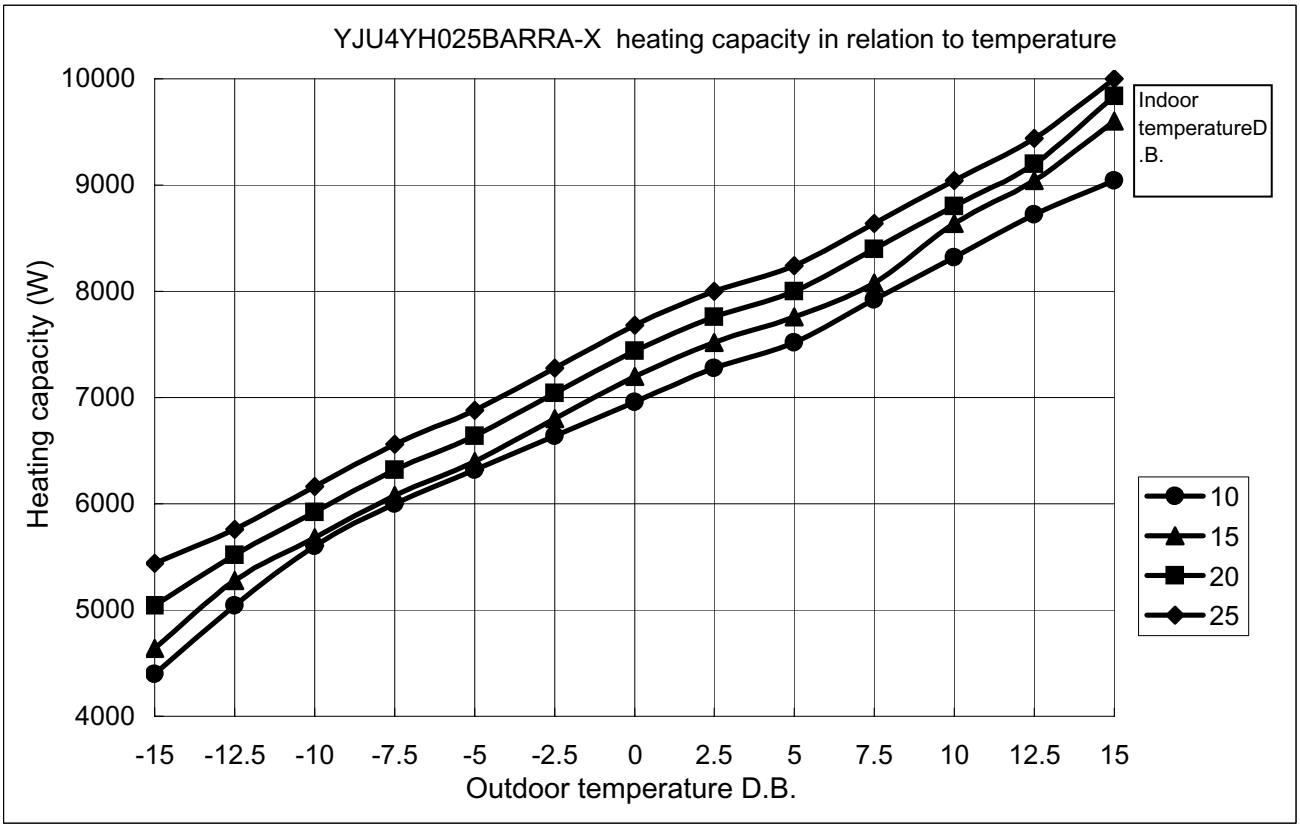


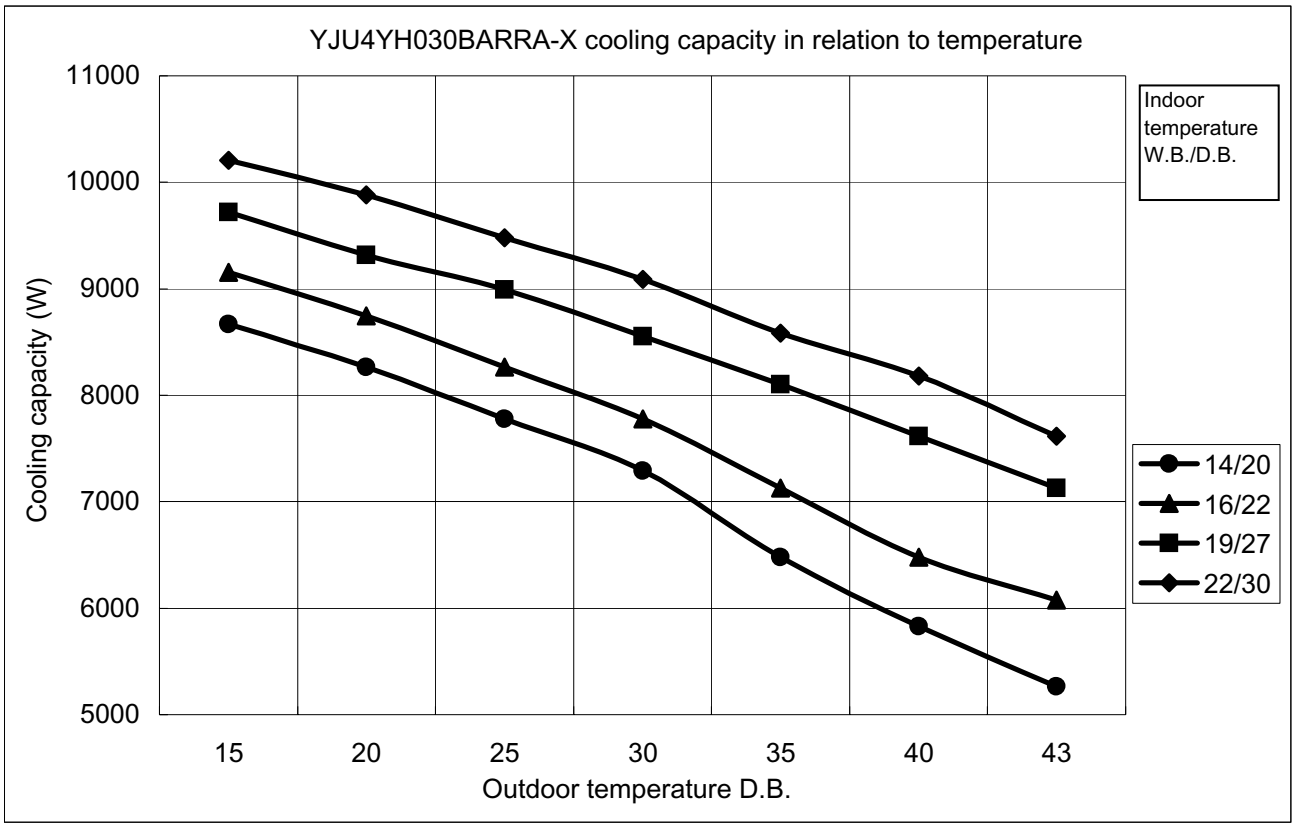
7. Outdoor performance curves

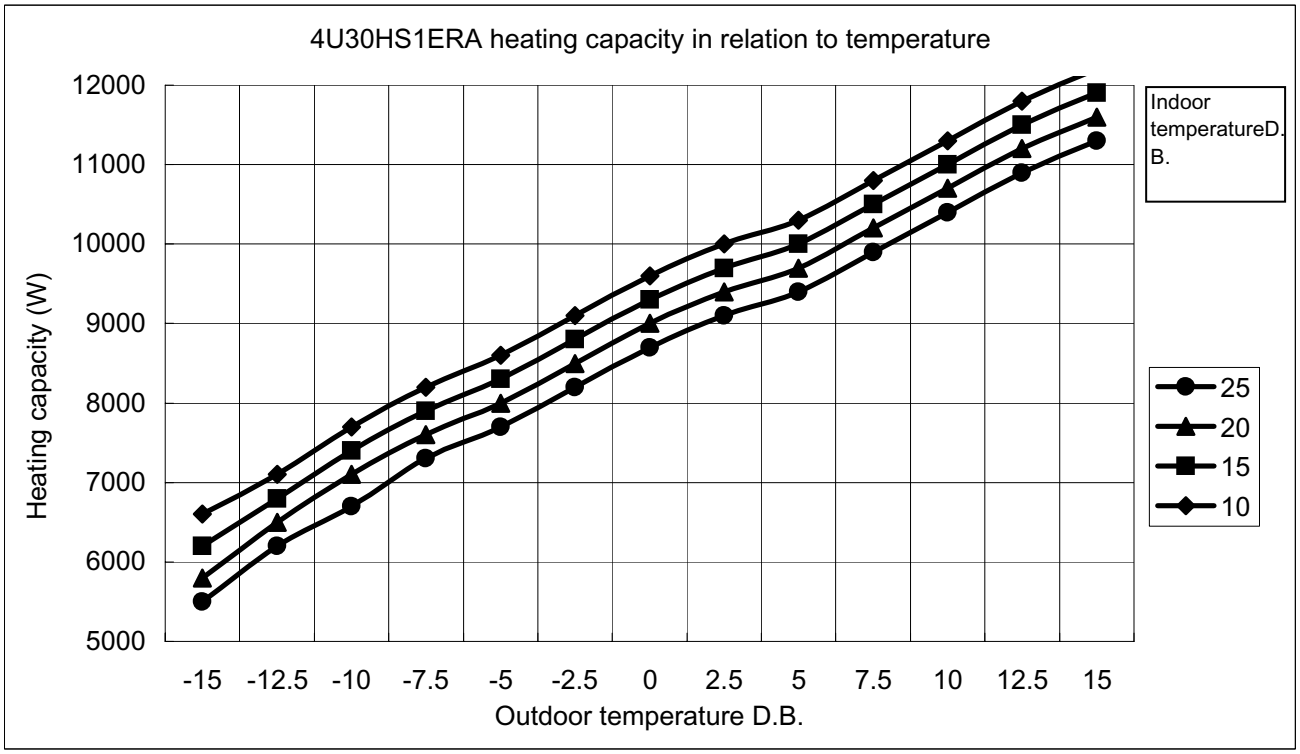


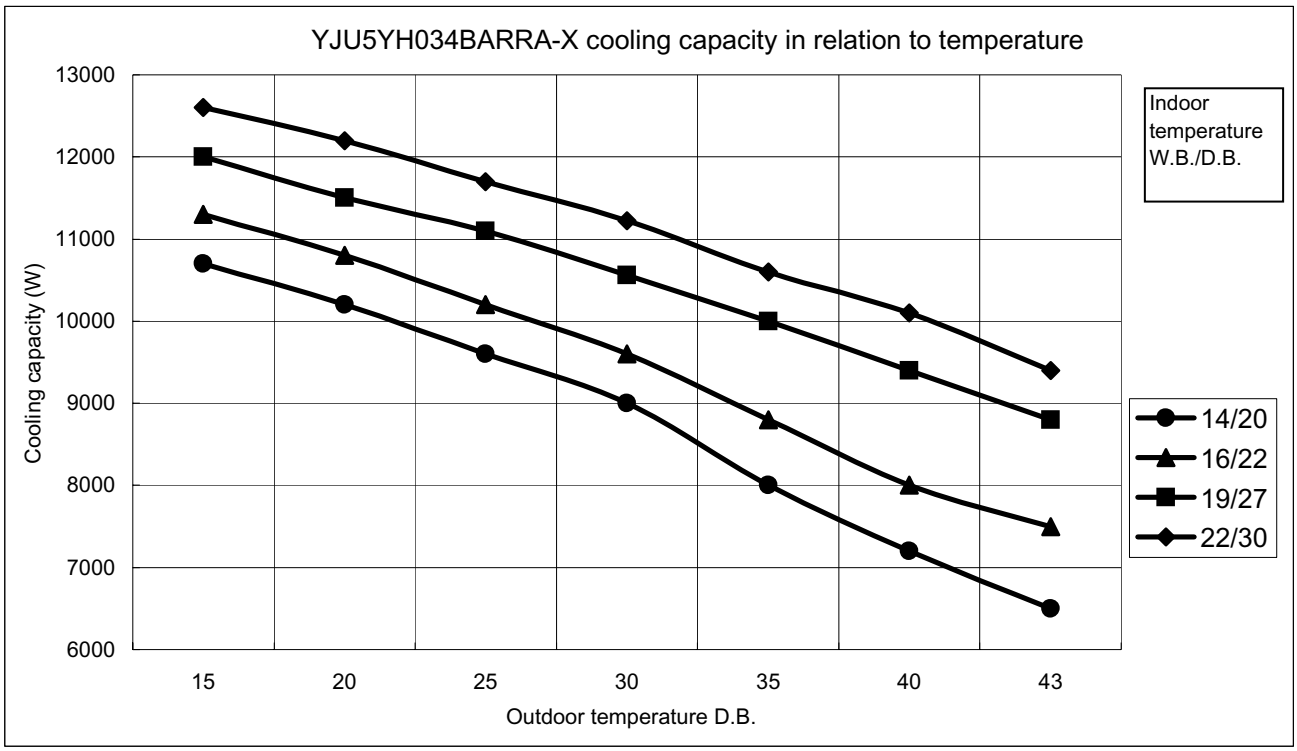


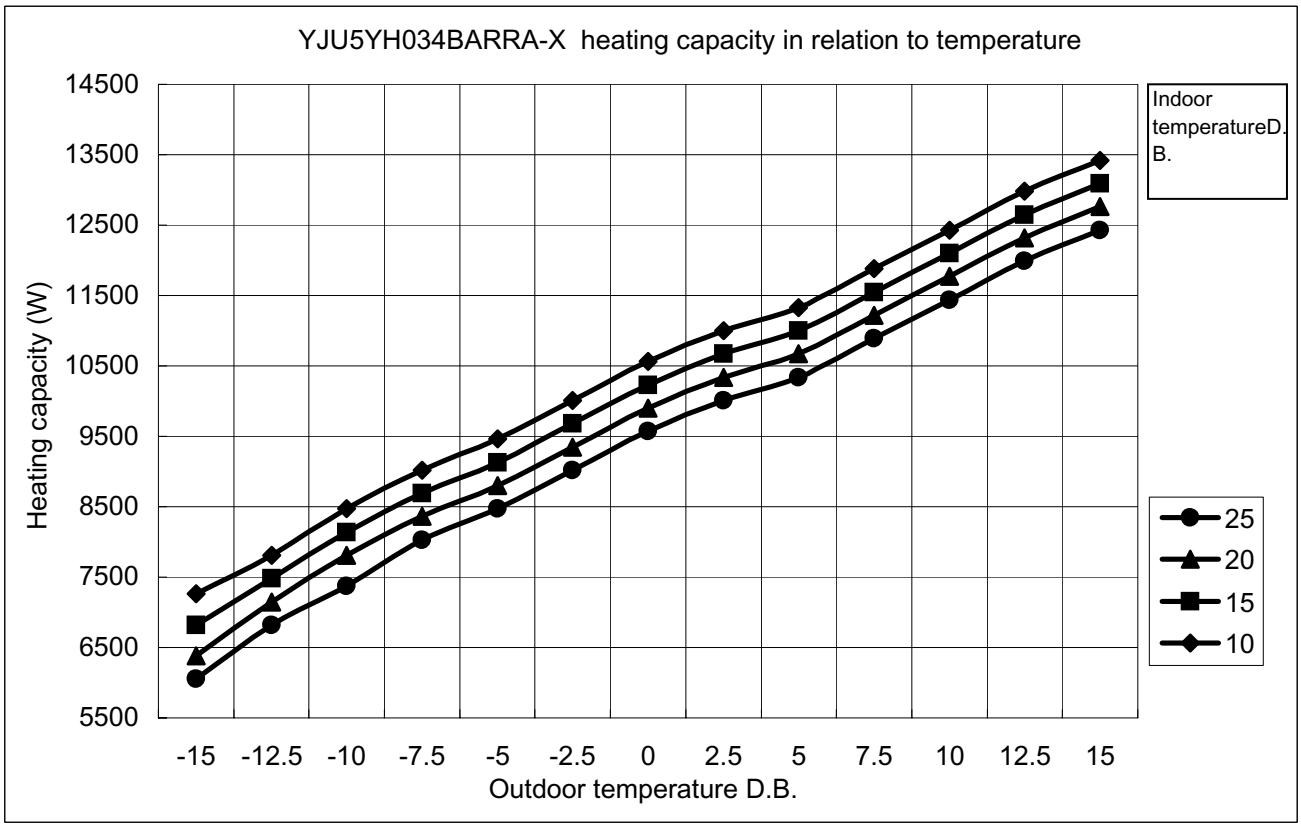

YJU4YH025BARRA-X cooling capacity in relation to temperature
Cooling capacity (W)
10000
9000
8000
7000
6000
5000
4000
15
20
25
30
35
40
43
Outdoor temperature D.B
Indoor temperature W.B./D.B.
14/20
16/22
19/27
22/30


YJU4YH025BARRA-X heating capacity in relation to temperature
Heating capacity (W)
10000
9000
8000
7000
6000
5000
4000
-15
-12.5
-10
-7.5
-5
-2.5
0
2.5
5
7.5
10
12.5
15
Outdoor temperature D.B.
Indoor temperatureD.B.
10
15
20
25


YJU4YH030BARRA-X cooling capacity in relation to temperature
Cooling capacity (W)
11000
10000
9000
8000
7000
6000
5000
15
20
25
30
35
40
43
Outdoor temperature D.B.
Indoor temperature W.B./D.B.
14/20
16/22
19/27
22/30


4U30HS1ERA heating capacity in relation to temperature
Heating capacity (W)
12000
11000
10000
9000
8000
7000
6000
5000
-15
-12.5
-10
-7.5
-5
-2.5
0
2.5
5
7.5
10
12.5
15
Outdoor temperature D.B.
Indoor temperatureD.B.
25
20
15
10


YJU5YH034BARRA-X cooling capacity in relation to temperature
Cooling capacity (W)
13000
12000
11000
10000
9000
8000
7000
6000
15
20
25
30
35
40
43
Outdoor temperature D.B.
Indoor temperature W.B./D.B.
14/20
16/22
19/27
22/30

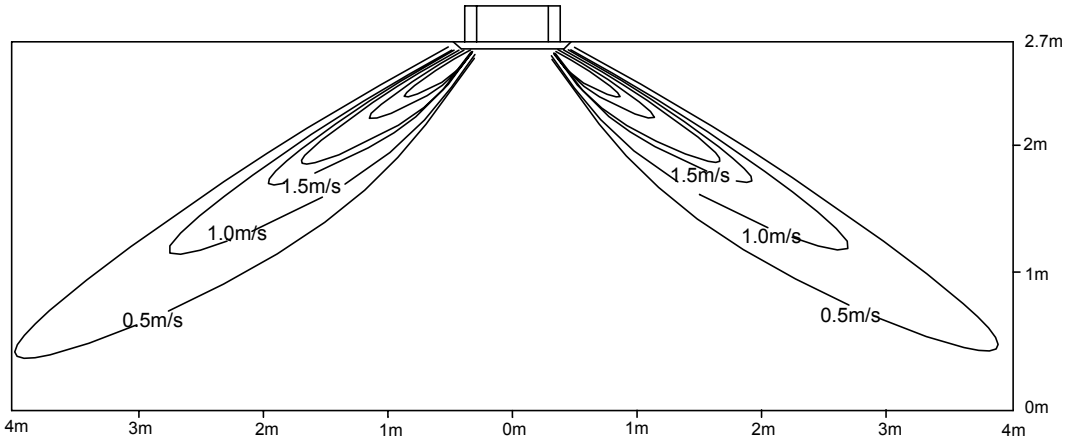

YJU5YH034BARRA-X heating capacity in relation to temperature
Heating capacity (W)
14500
13500
12500
11500
10500
9500
8500
7500
6500
5500
-15
-12.5
-10
-7.5
-5
-2.5
0
2.5
5
7.5
10
12.5
15
Outdoor temperature D.B.
Indoor temperatureD.B.
25
20
15
10

8. Indoor air velocity and temperature distribution curves

8.1 YHKMXH009-024BARR-FX

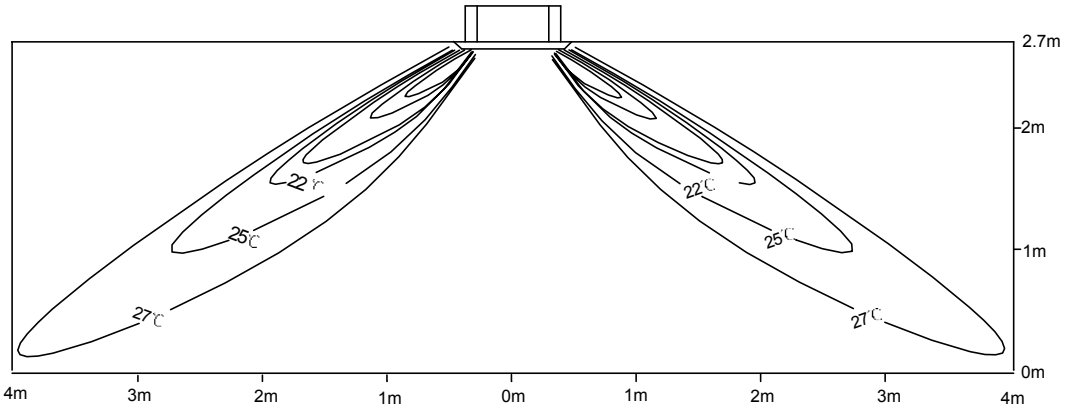
a. Cooling / Air Velocity Distribution

Cooling
Blowy angle:40
Air Velocity Distribution



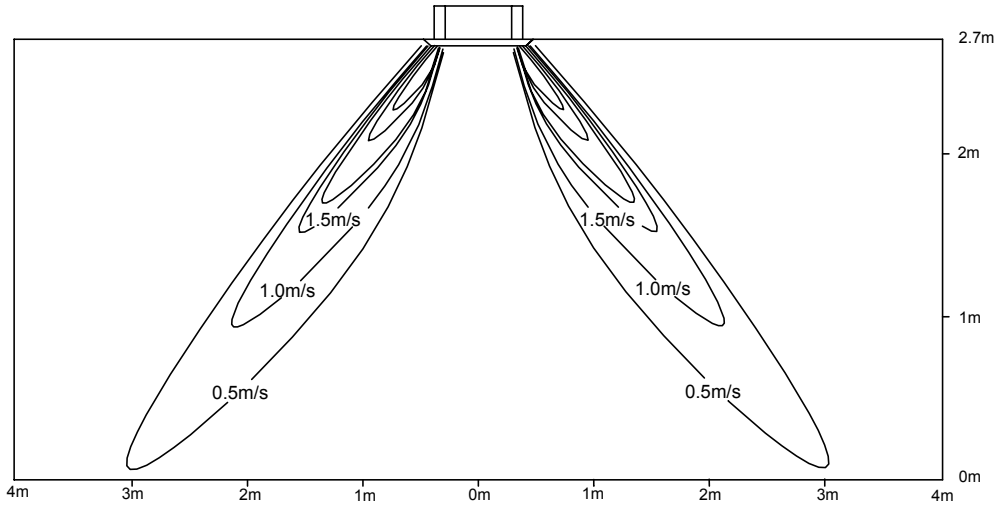
b. Cooling / Temperature Distribution

Cooling
Blowy angle:40
Temperature Distribution



c. Heating / Air Velocity Distribution

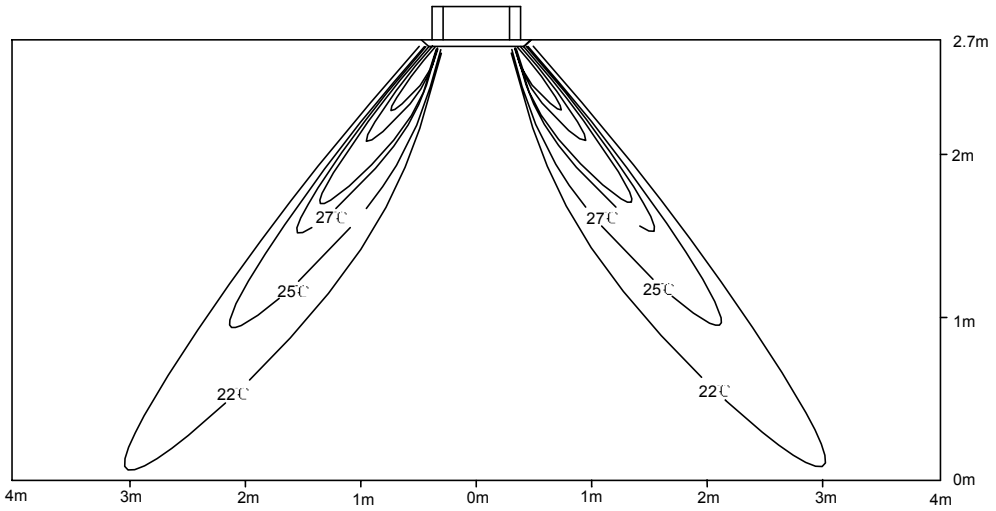
Heating
Blowy angle:70
Air velocity Distribution



d. Heating / Temperature Distribution

Heating
Blowy angle:70

Temperature Distribution

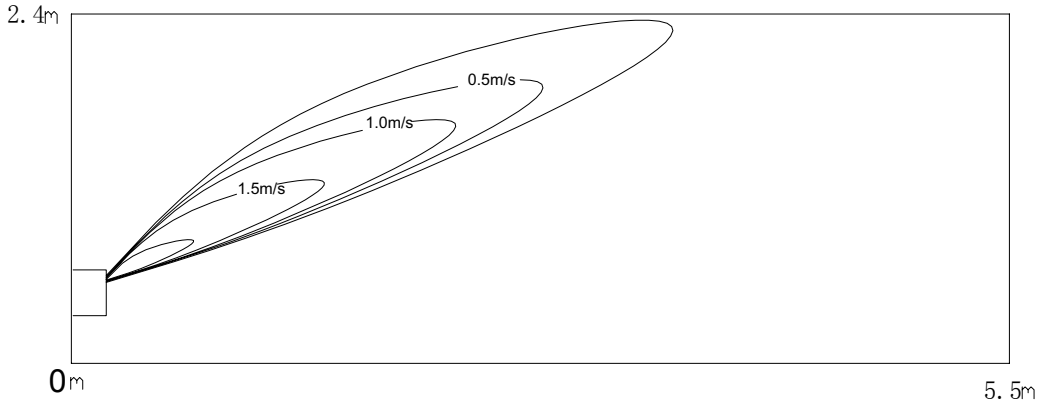


8.2 YHFMXH012-018BARR-FX

a）Grounding

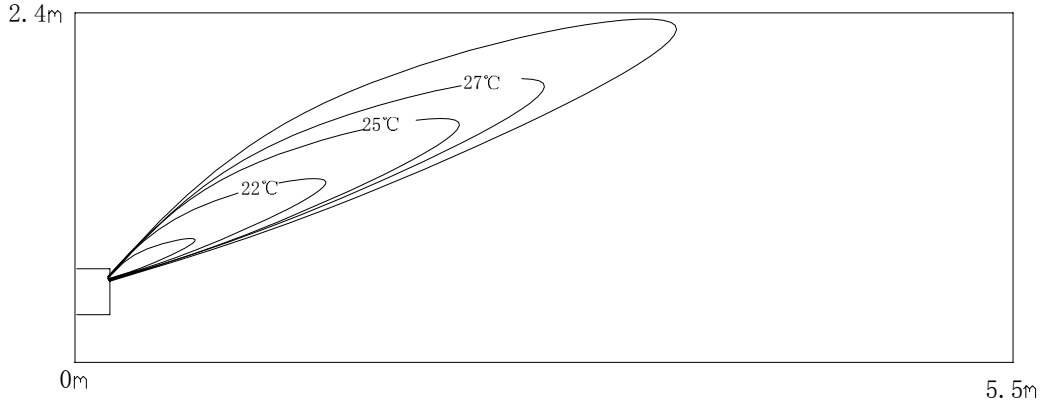
a. Cooling / Air Velocity Distribution

Cooling
Blowy angle:25
Air Velocity Distribution



b. Cooling / Temperature Distribution

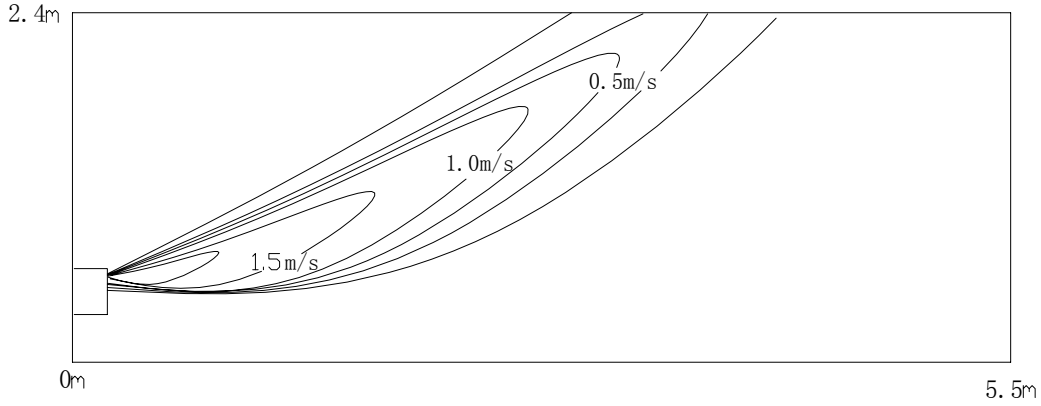
Cooling
Blowy angle:25
Temperature Distribution



c. Heating / Air Velocity Distribution

Heating
Blowy angle:5
Air velocity Distribution

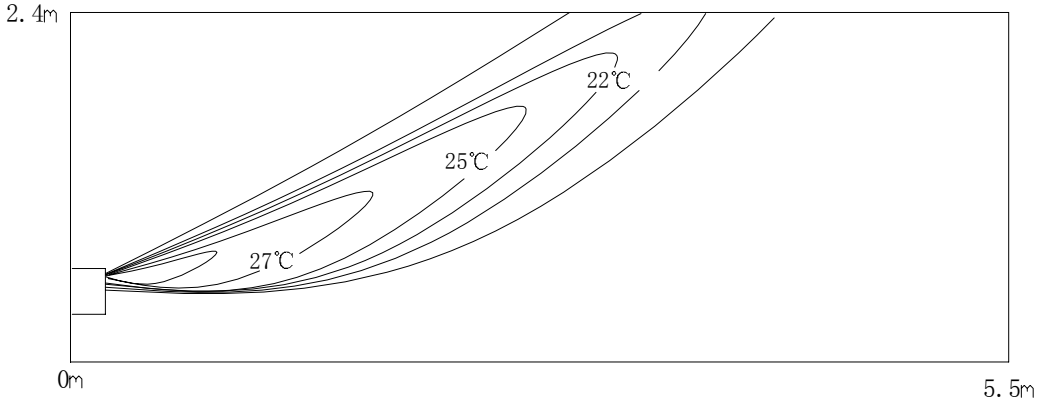
2



d. Heating / Temperature Distribution

Heating
Blowy angle:5
Temperature Distribution

2

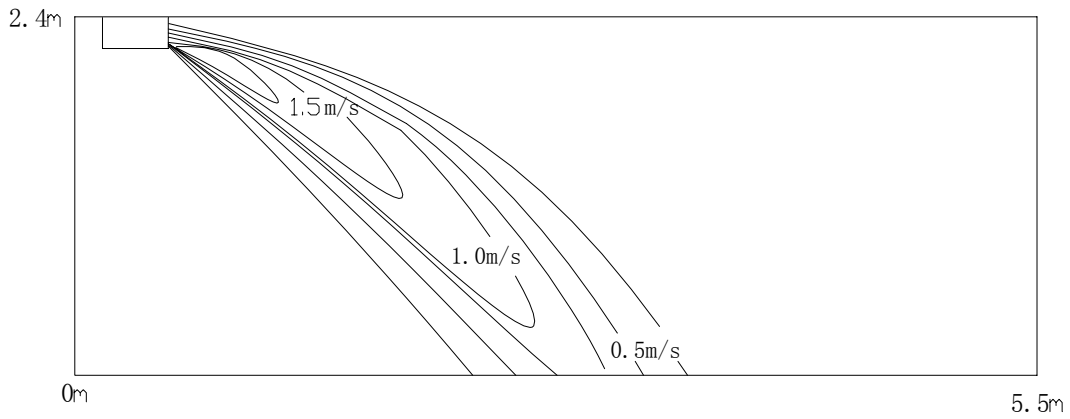


b) Ceiling

a. Cooling / Air Velocity Distribution

Cooling
Blowy angle:25
Air Velocity Distribution

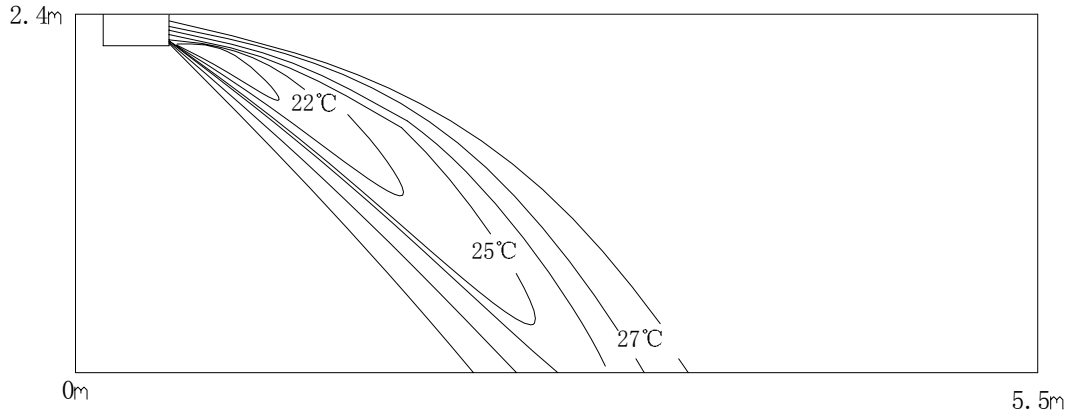
2



b. Cooling / Temperature Distribution

Cooling
Blowy angle:25
Temperature Distribution

2

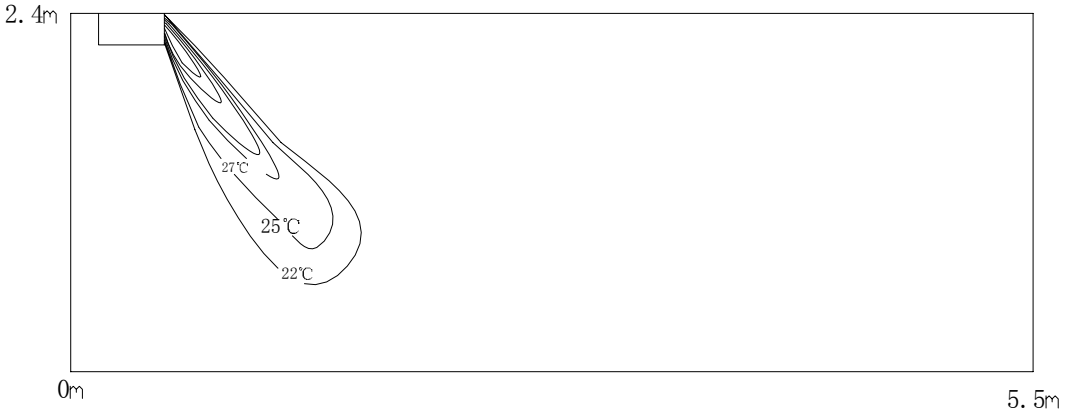


c. Heating / Air Velocity Distribution

Heating
Blowy angle:65
Air velocity Distribution

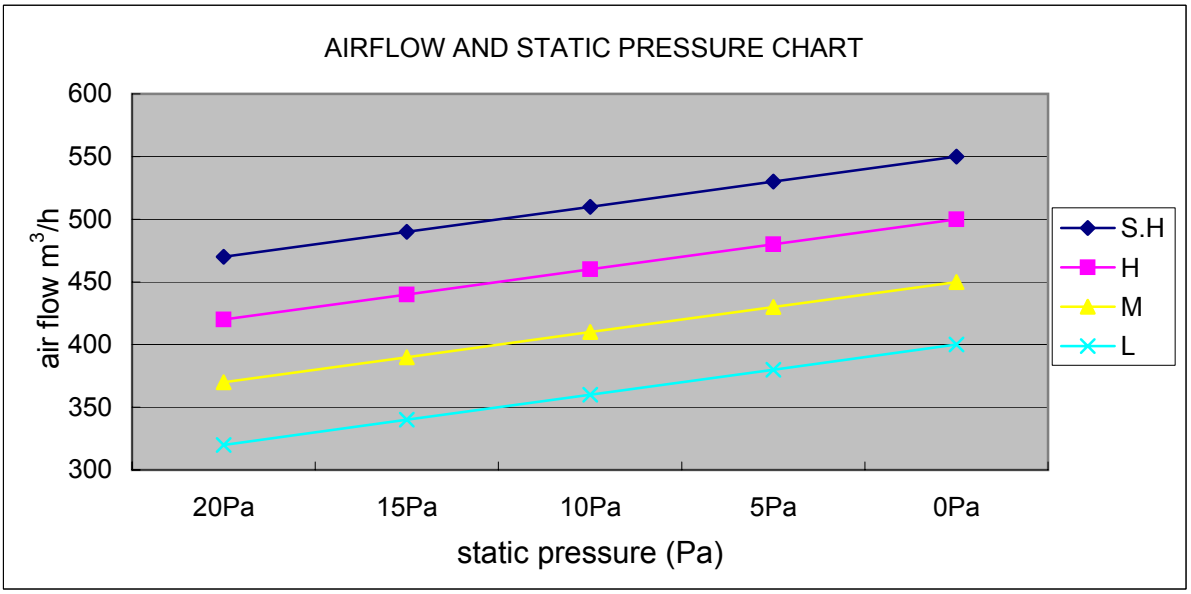
d. Heating / Temperature Distribution

Heating
Blowy angle:65
Temperature Distribution

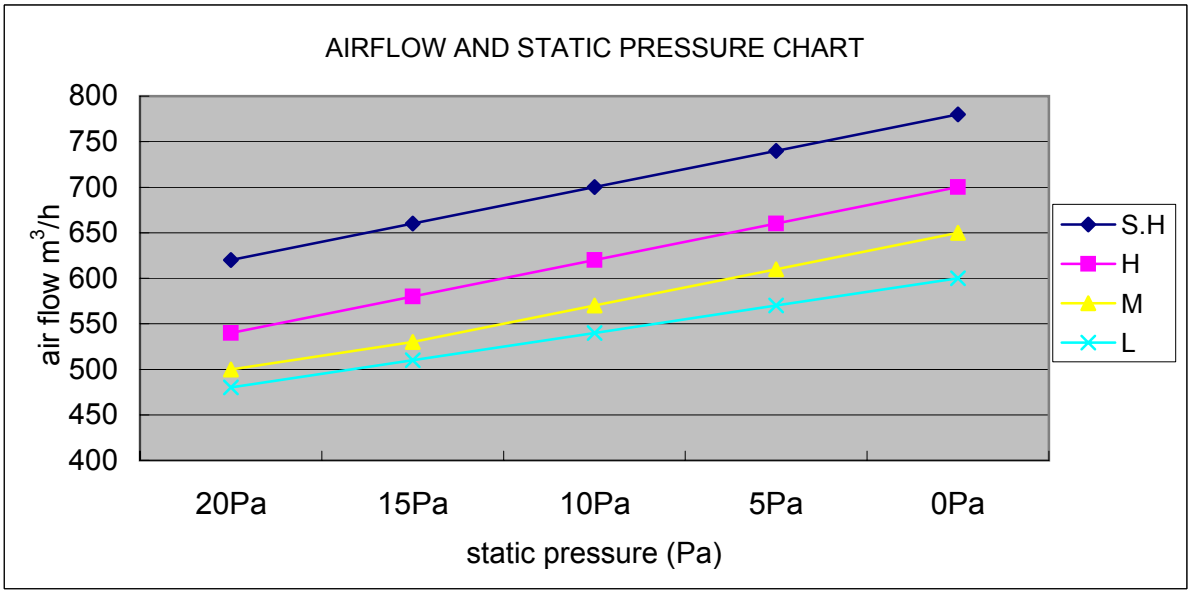


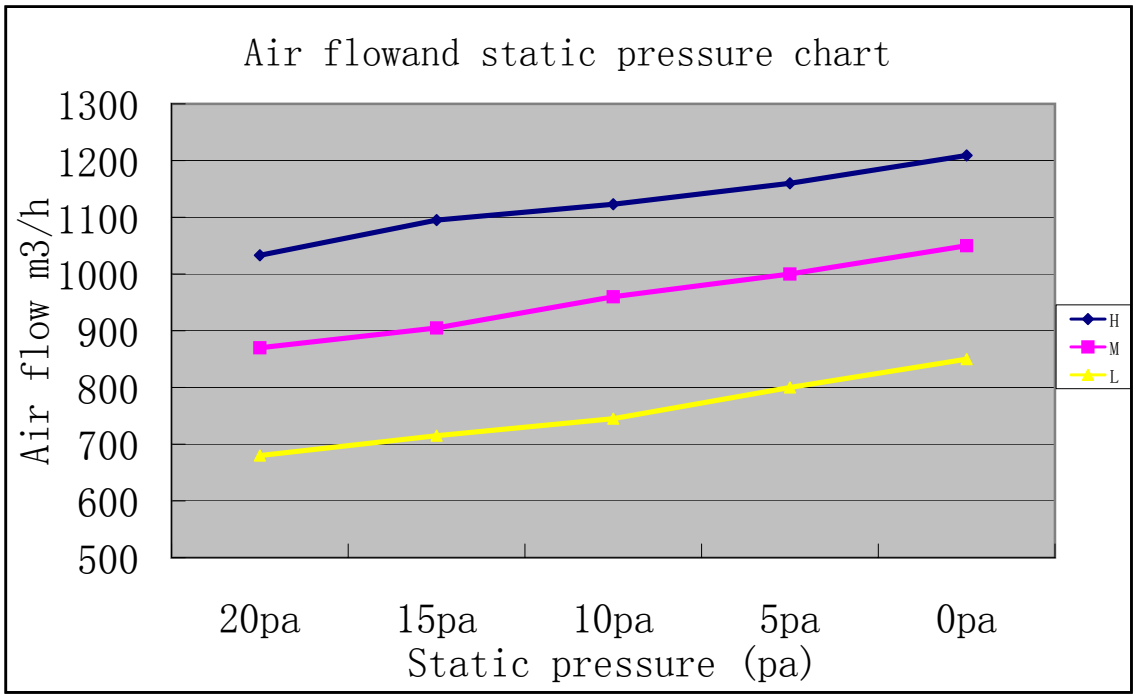
9. Air flow and static pressure chart

YHDMXH009-012BARR-FX



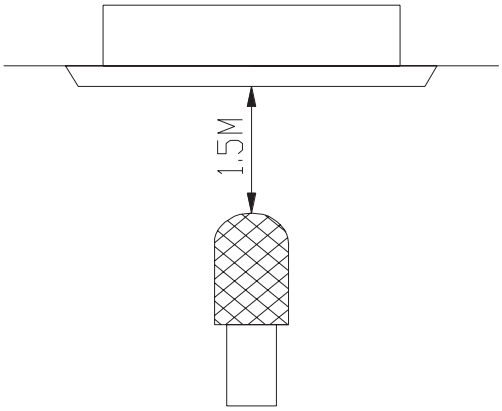
YHDMXH018BARR-FX




Air flowand static pressure chart
1300
1200
1100
1000
900
800
700
600
500
Air flow m3/h
20pa
15pa
10pa
5pa
0pa
Static pressure (pa)
H
M
L

10. Noise level

a. Casset type indoor unit



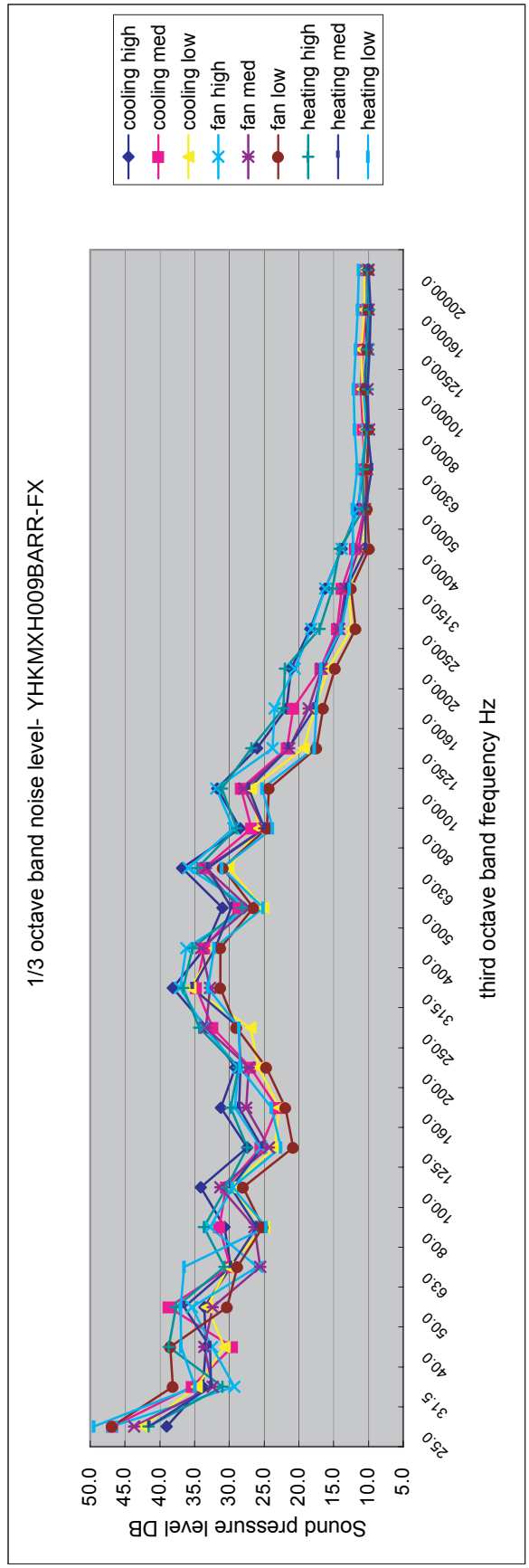
(1) Testing illustrate:

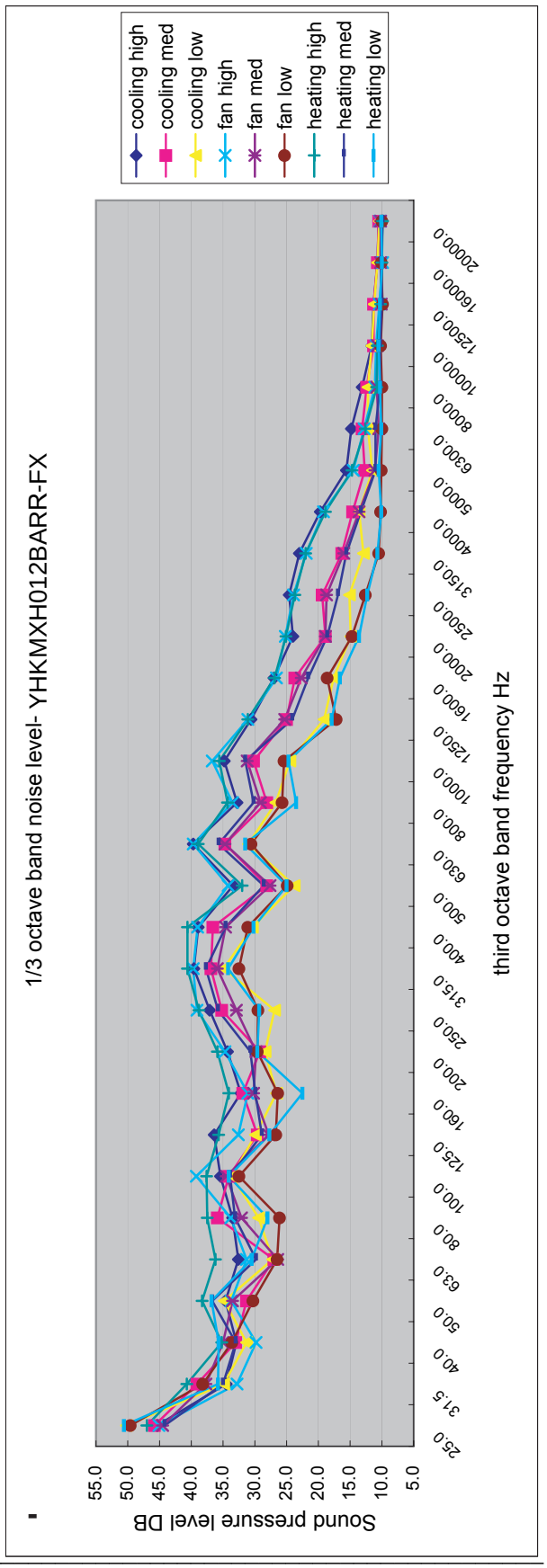
(2) Testing condition:

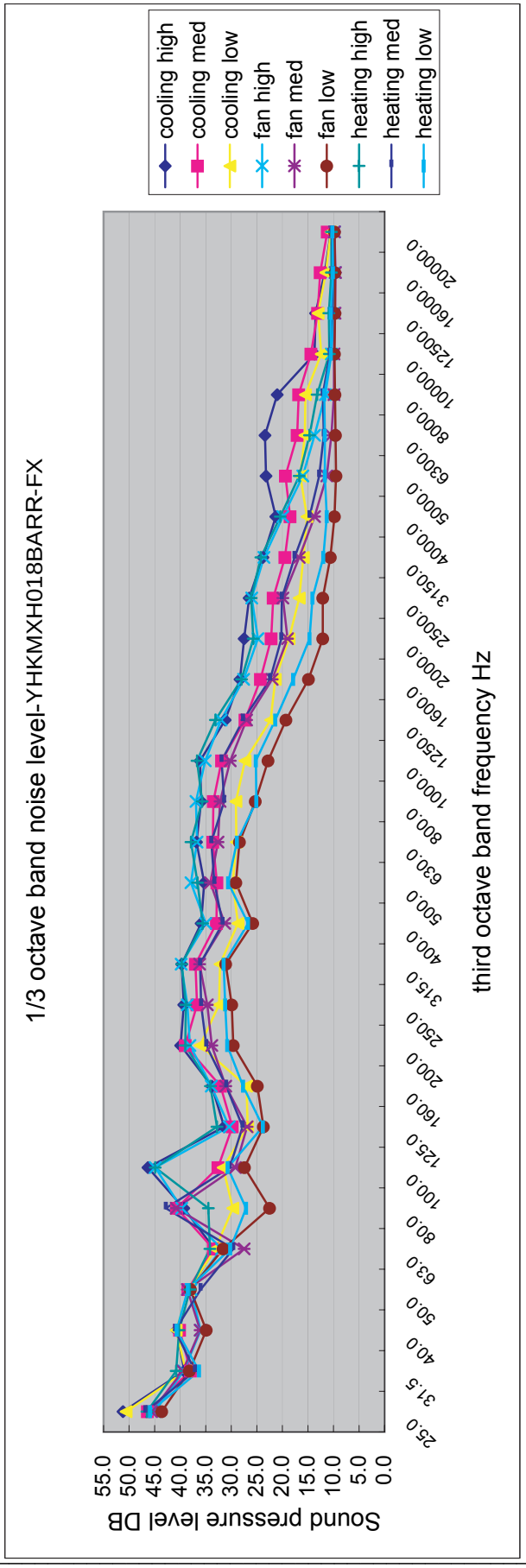
a. Unit running in the nominal condition
b. Test in the semi-anechoic chamber
c. Noise level varies from the actual factors such as room structure, etc.

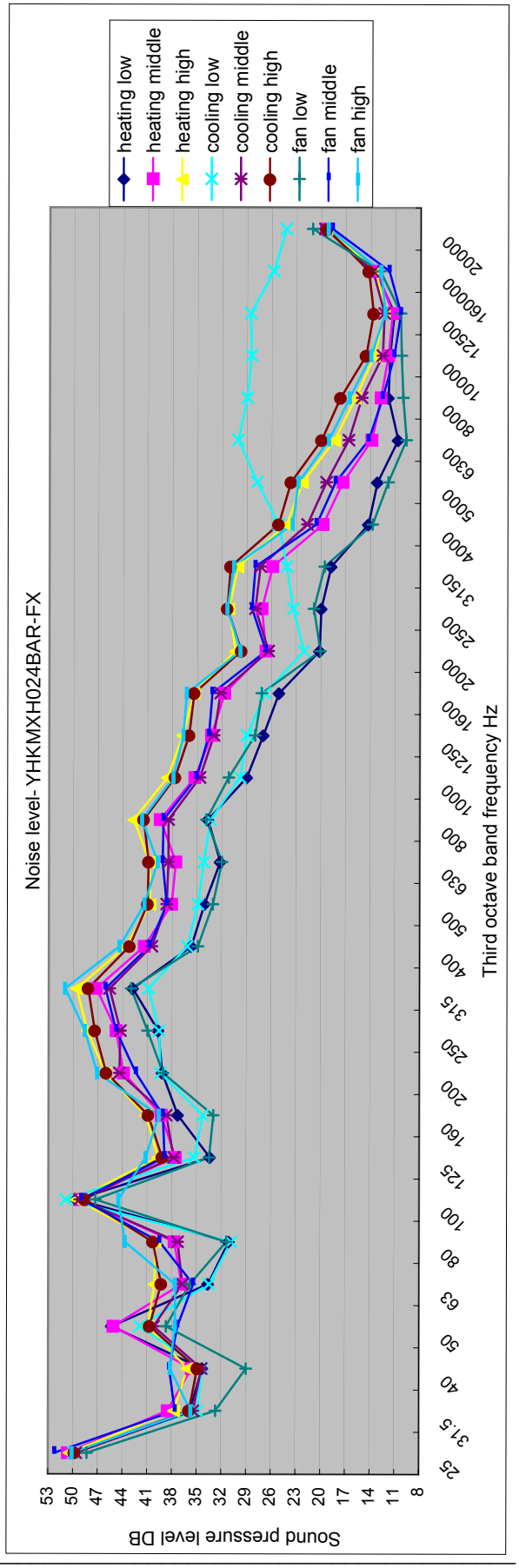
(3) Test method

According to the testing illustrator, the microphones wearing sponge style cover should be placed in the right position


1/3 octave band noise level- YHKMXH009BARR-FX
Sound pressure level DB
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low

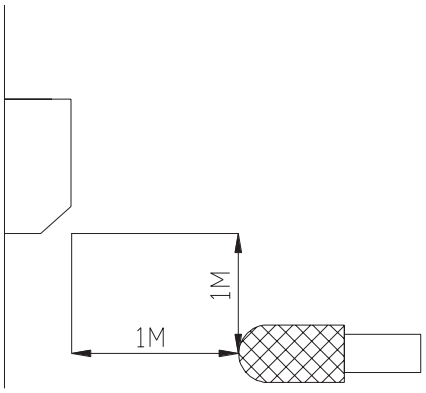

1/3 octave band noise level- YHKMXH012BARR-FX
Sound pressure level DB
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low


1/3 octave band noise level-YHKMXH018BARR-FX
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low
Sound pressure level DB
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz


Noise level- YHKMXH024BAR-FX
heating low
heating middle
heating high
cooling low
cooling middle
cooling high
fan low
fan middle
fan high
Sound pressure level DB
53
50
47
44
41
38
35
32
29
26
23
20
17
14
11
8
25
31.5
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1000
1250
1600
2000
2500
3150
4000
5000
6300
8000
10000
12500
16000
20000
Third octave band frequency Hz

b. Convertible type indoor unit

(1) Testing illustrate:

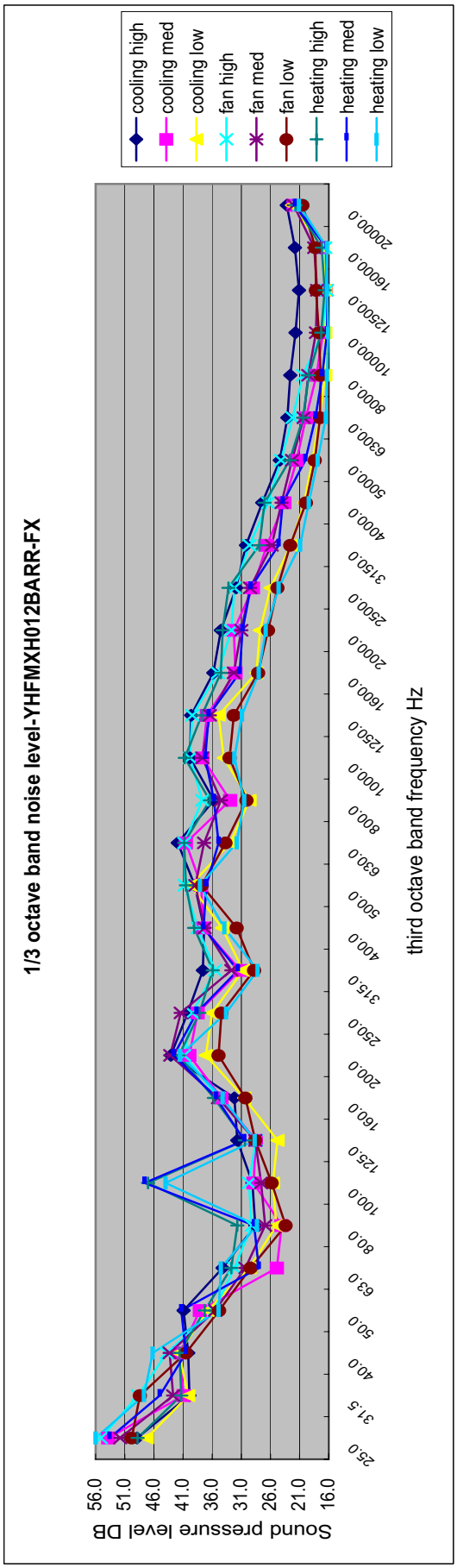


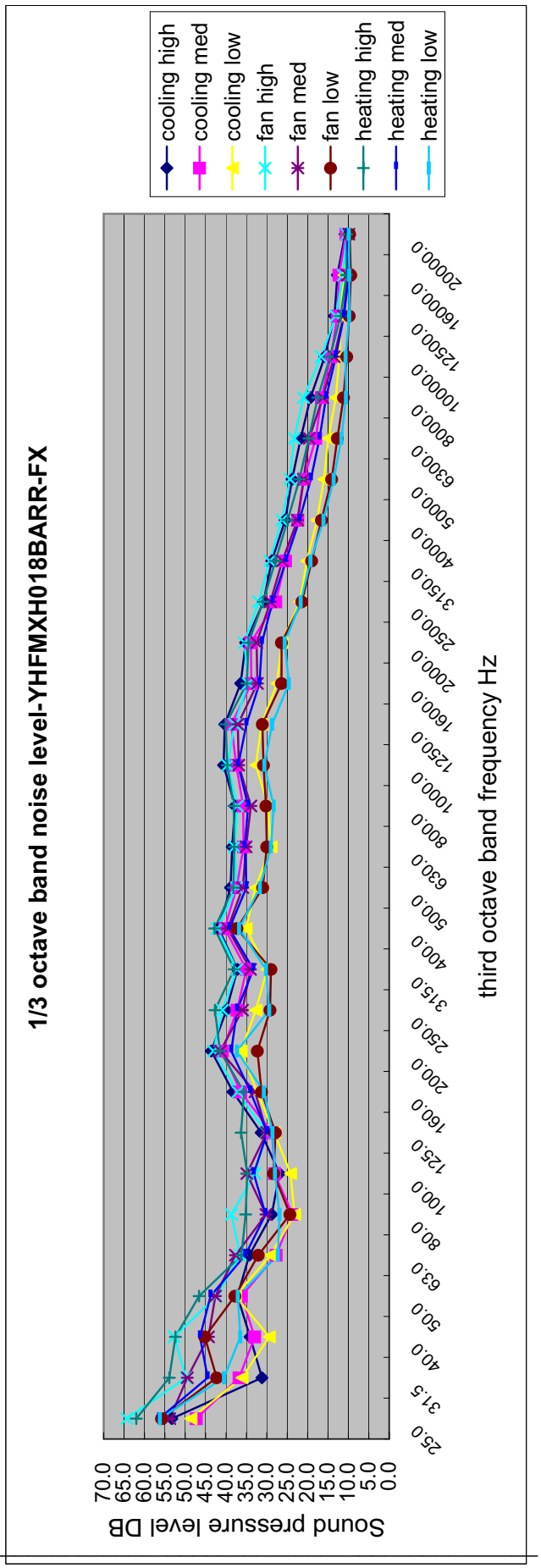
(2) Testing condition:

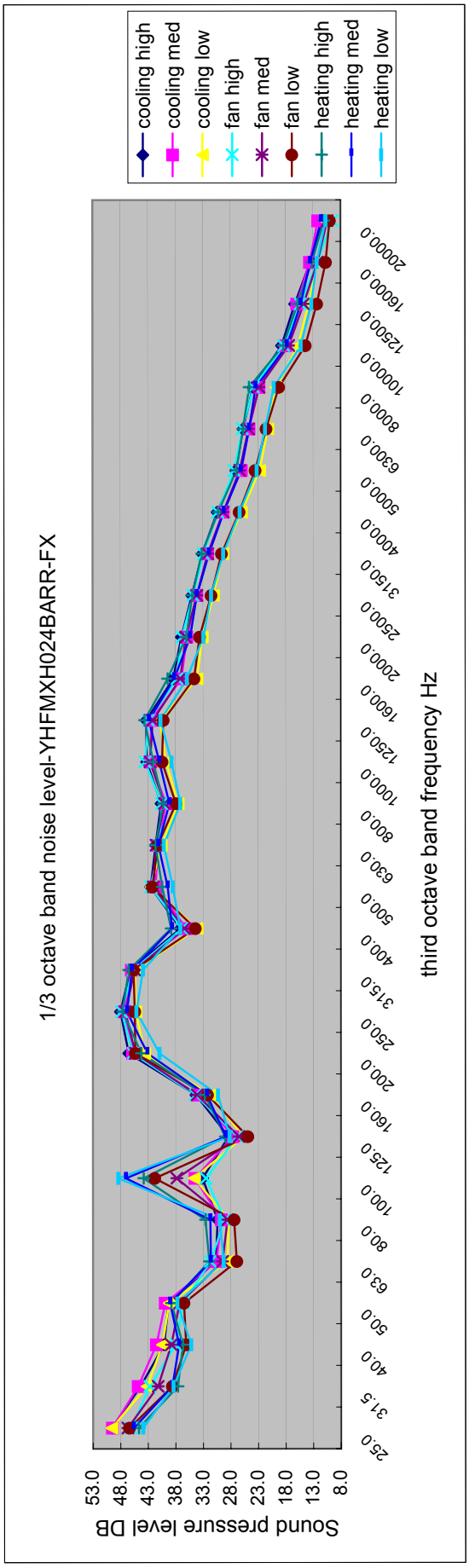
a. Unit running in the nominal condition
b. Test in the semi-anechoic chamber
c. Noise level varies from the actual factors such as room structure, etc.

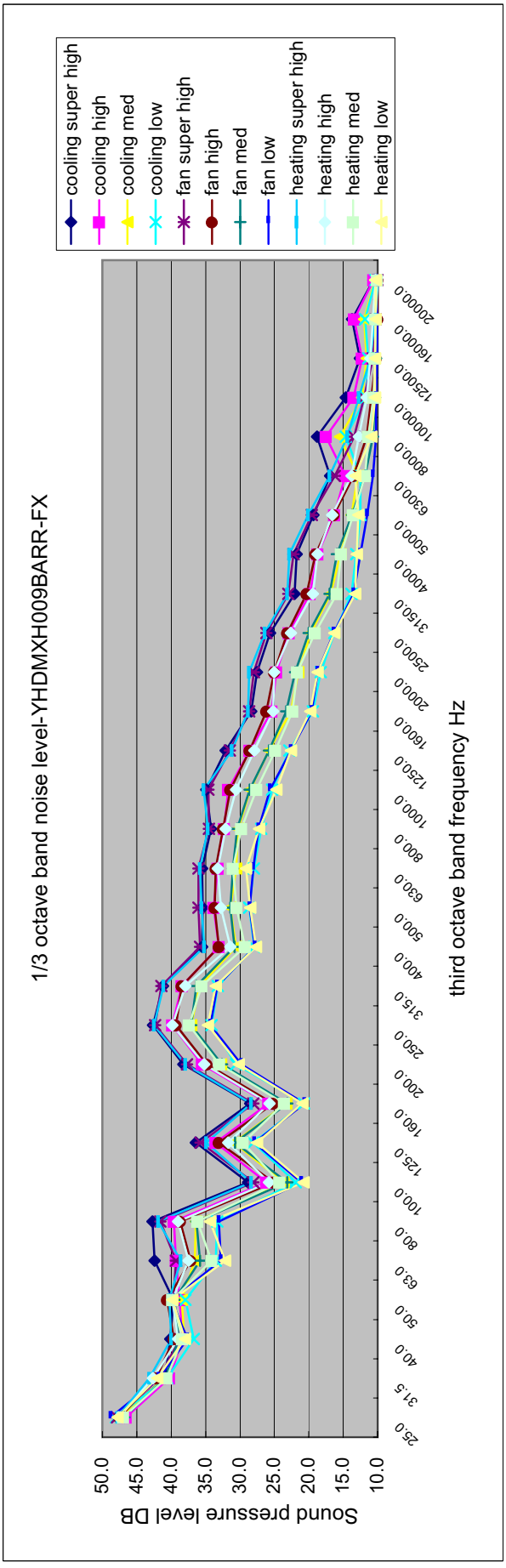
(3) Test method

According to the testing illustrator, the microphones wearing sponge style cover should be placed in the right position


1/3 octave band noise level-YHFMXH012BARR-FX
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low
Sound pressure level DB
56.0
51.0
46.0
41.0
36.0
31.0
26.0
21.0
16.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz

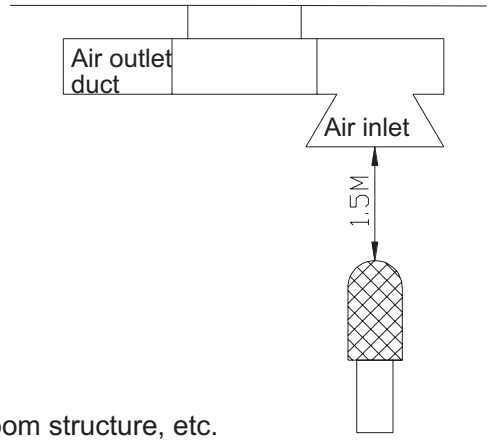

1/3 octave band noise level-YHFMXH018BARR-FX
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low
Sound pressure level DB
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz


1/3 octave band noise level-YHFMXH024BARR-FX
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low
Sound pressure level DB
53.0
48.0
43.0
38.0
33.0
28.0
23.0
18.0
13.0
8.0
third octave band frequency Hz
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0


1/3 octave band noise level-YHDMXH009BARR-FX
cooling super high
cooling high
cooling med
cooling low
fan super high
fan high
fan med
fan low
heating super high
heating high
heating med
heating low
Sound pressure level DB
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
third octave band frequency Hz
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0

c. Duct type indoor unit

(1) Testing illustrate:

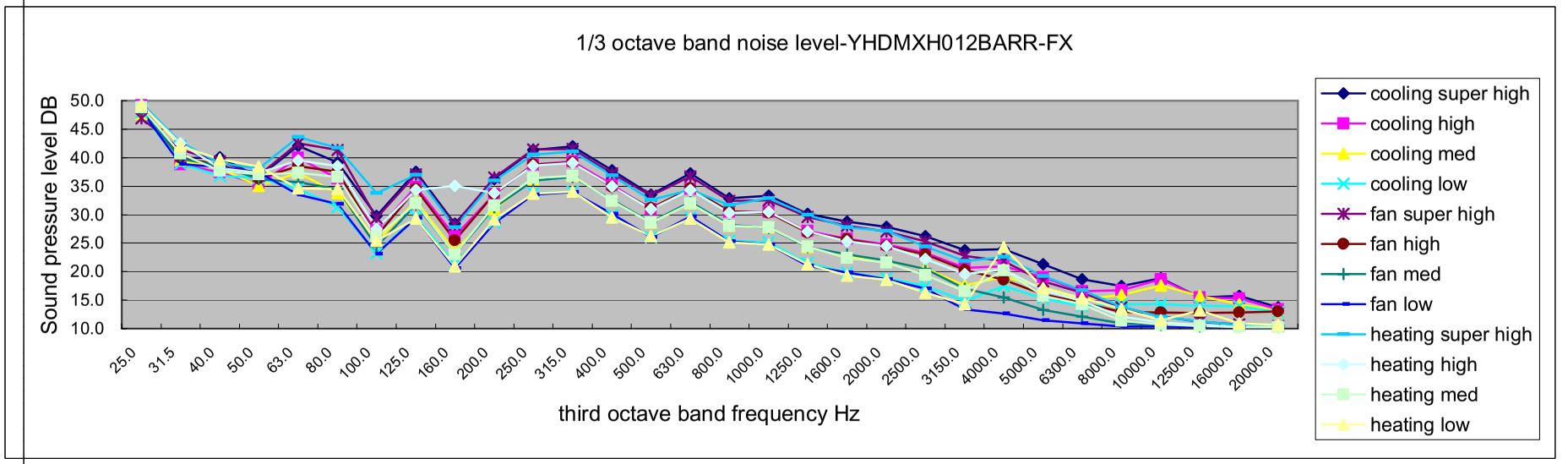


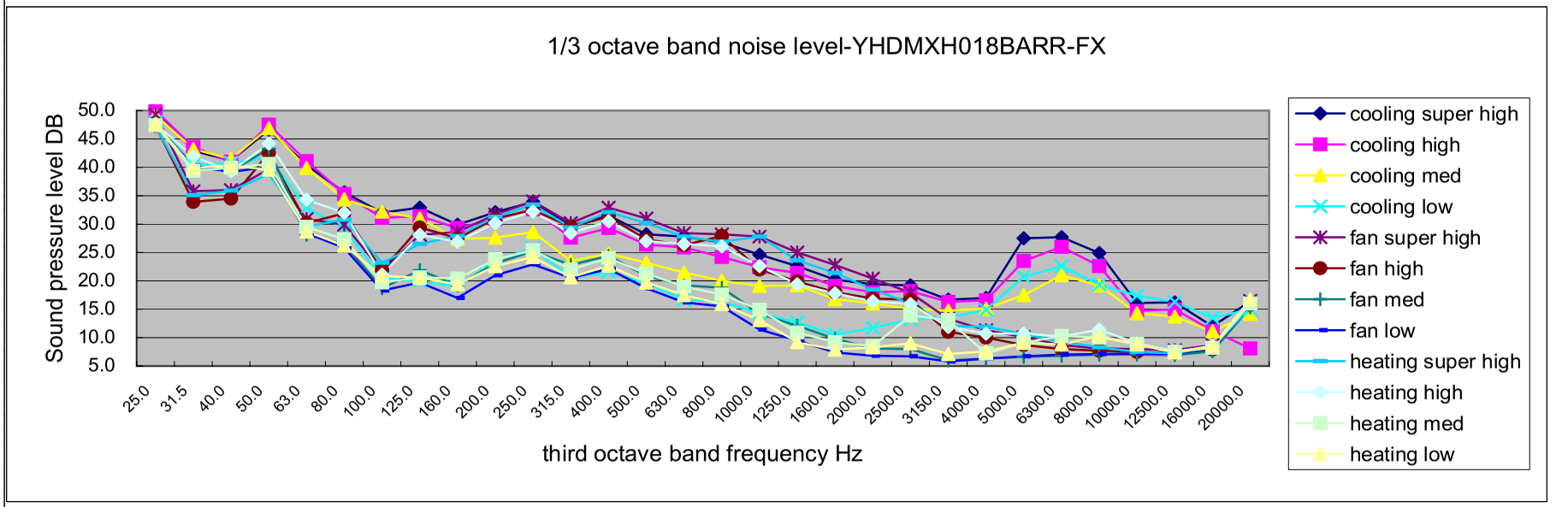
(2) Testing condition:

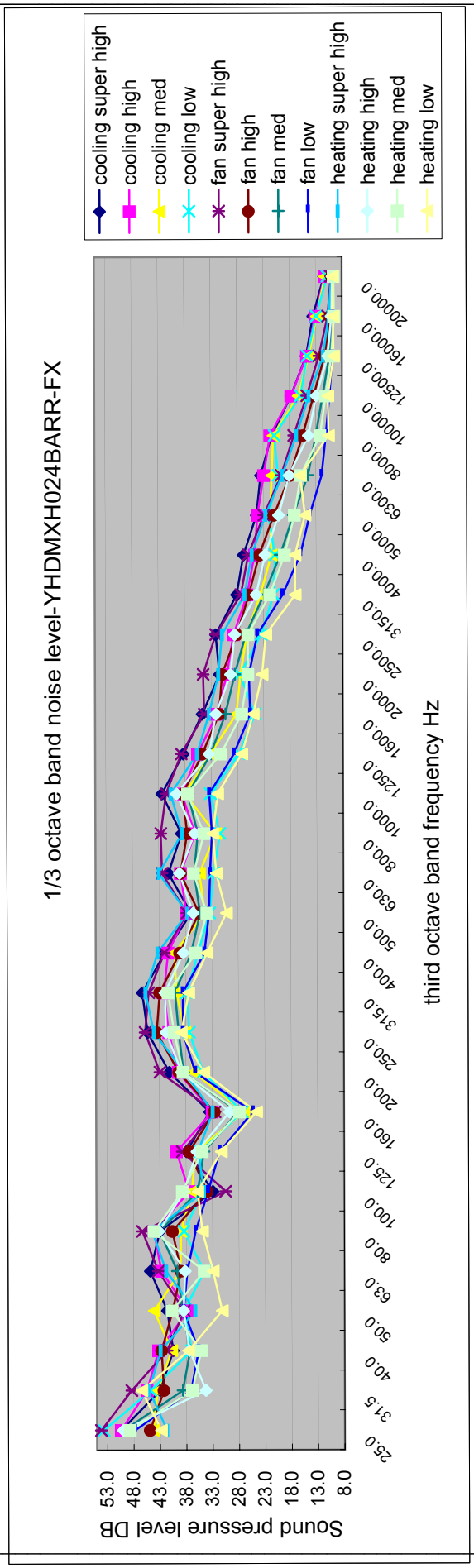
a. Unit running in the nominal condition
b. Test in the semi-anechoic chamber
c. Noise level varies from the actual factors such as room structure, etc.

(3) Test method

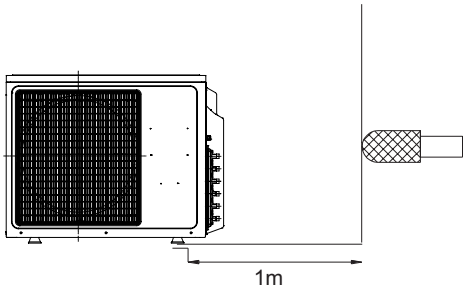
According to the testing illustrator, the microphones wearing sponge style cover should be placed in the right position


1/3 octave band noise level-YHDMXH012BARR-FX
Sound pressure level DB
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
25.0 31.5 40.0 50.0 63.0 80.0 100.0 125.0 160.0 200.0 250.0 315.0 400.0 500.0 630.0 800.0 1000.0 1250.0 1600.0 2000.0 2500.0 3150.0 4000.0 5000.0 6300.0 8000.0 10000.0 12500.0 16000.0 20000.0
third octave band frequency Hz
cooling super high
cooling high
cooling med
cooling low
fan super high
fan high
fan med
fan low
heating super high
heating high
heating med
heating low


1/3 octave band noise level-YHDMXH018BARR-FX
Sound pressure level DB
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
25.0 31.5 40.0 50.0 63.0 80.0 100.0 125.0 160.0 200.0 250.0 315.0 400.0 500.0 630.0 800.0 1000.0 1250.0 1600.0 2000.0 2500.0 3150.0 4000.0 5000.0 6300.0 8000.0 10000.0 12500.0 16000.0 20000.0
third octave band frequency Hz
cooling super high
cooling high
cooling med
cooling low
fan super high
fan high
fan med
fan low
heating super high
heating high
heating med
heating low


1/3 octave band noise level-YHDMXH024BARR-FX
cooling super high
cooling high
cooling med
cooling low
fan super high
fan high
fan med
fan low
heating super high
heating high
heating med
heating low
Sound pressure level DB
53.0
48.0
43.0
38.0
33.0
28.0
23.0
18.0
13.0
8.0
third octave band frequency Hz
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0

(1) Testing illustration:

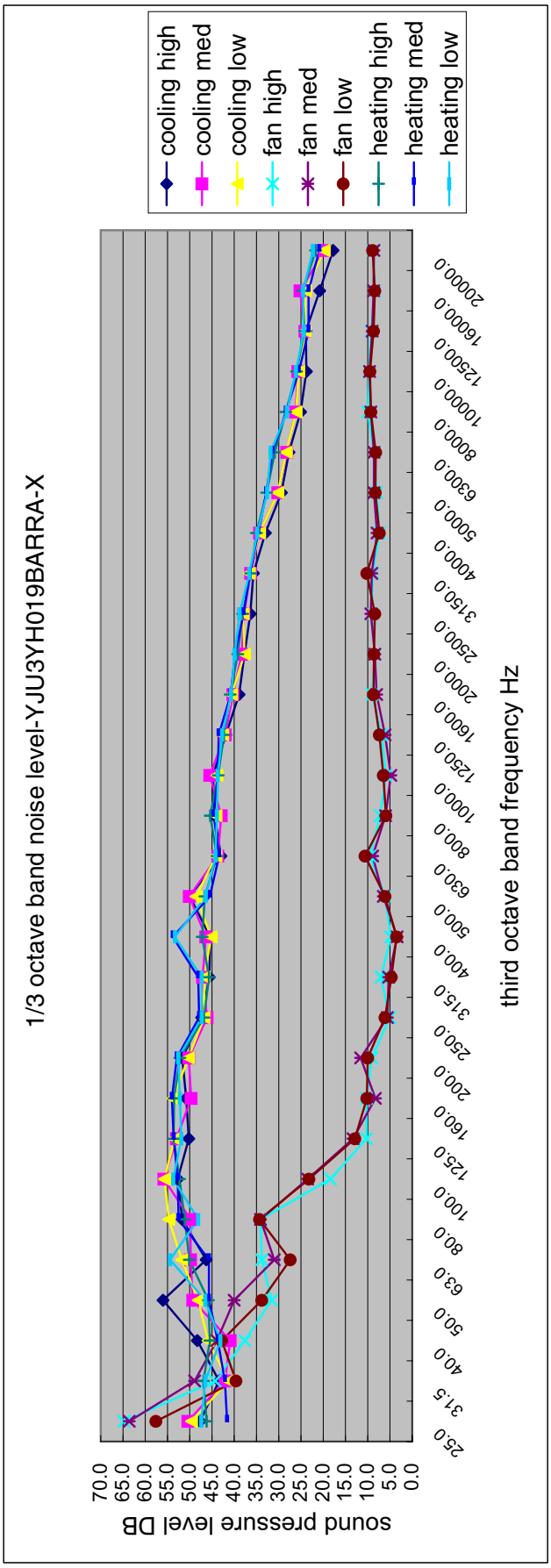


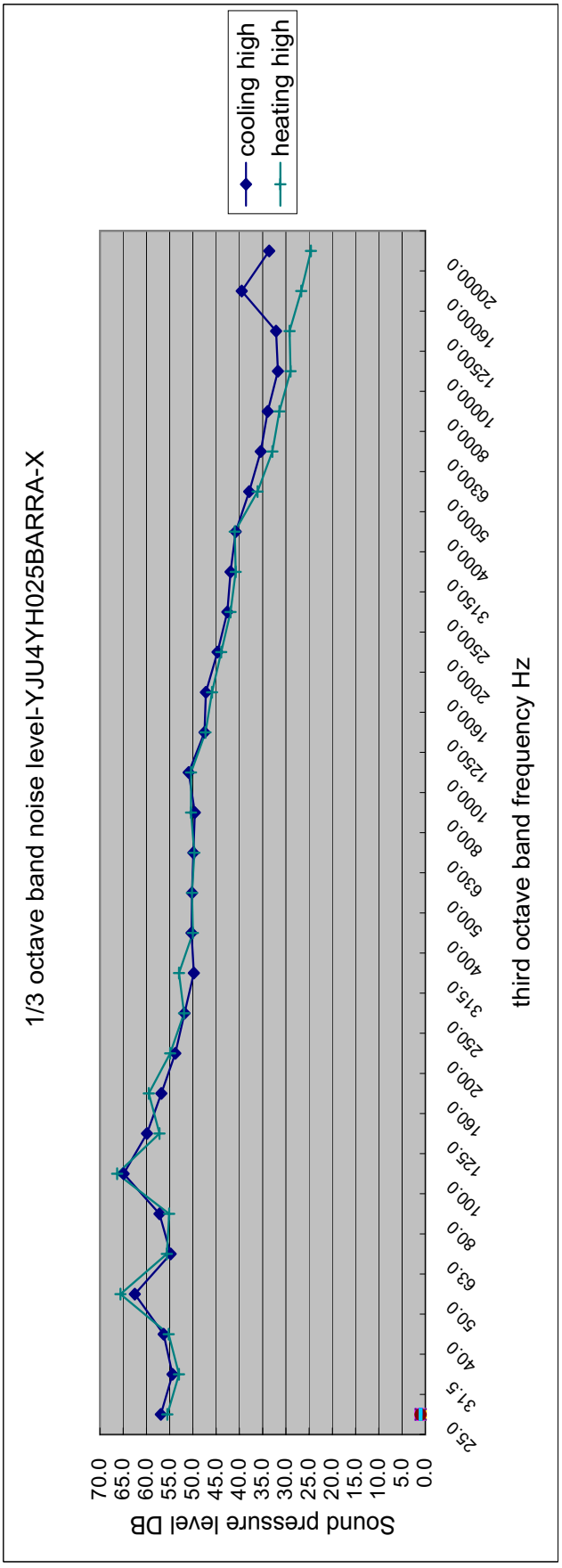
(2) Testing condition:

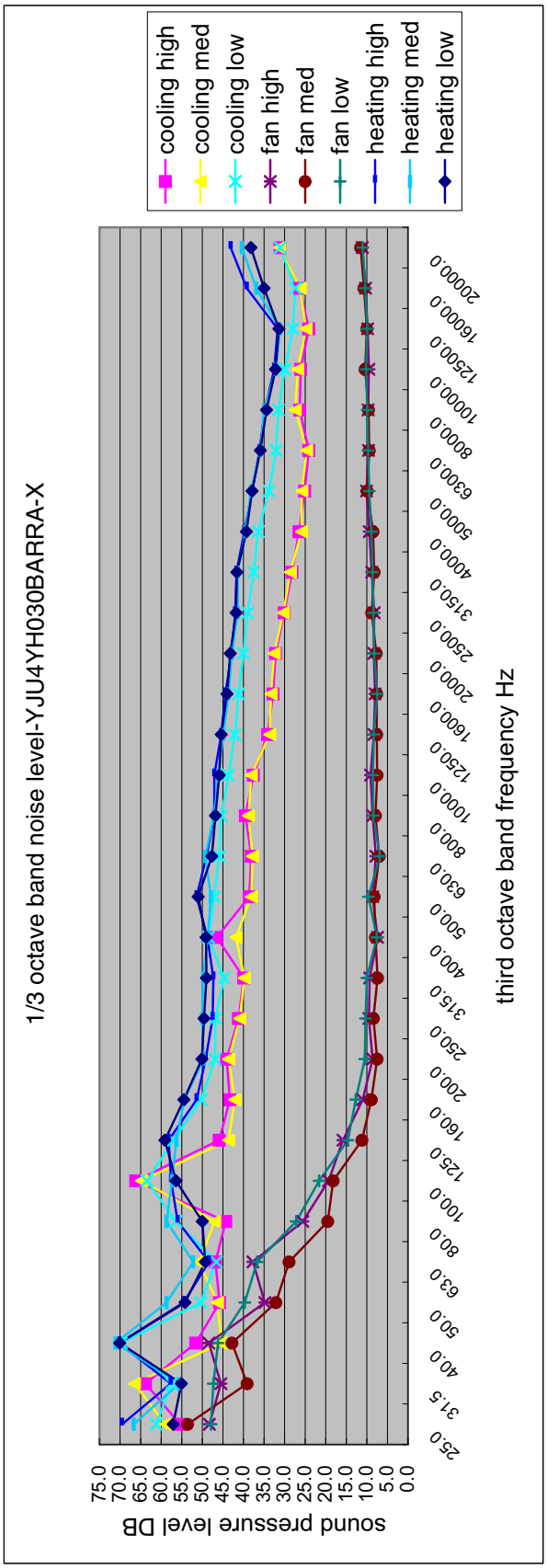
a. Unit running in the nominal condition
b. Test in the semi-anechoic chamber
c. Noise level varies from the actual factors such as room structure, etc.

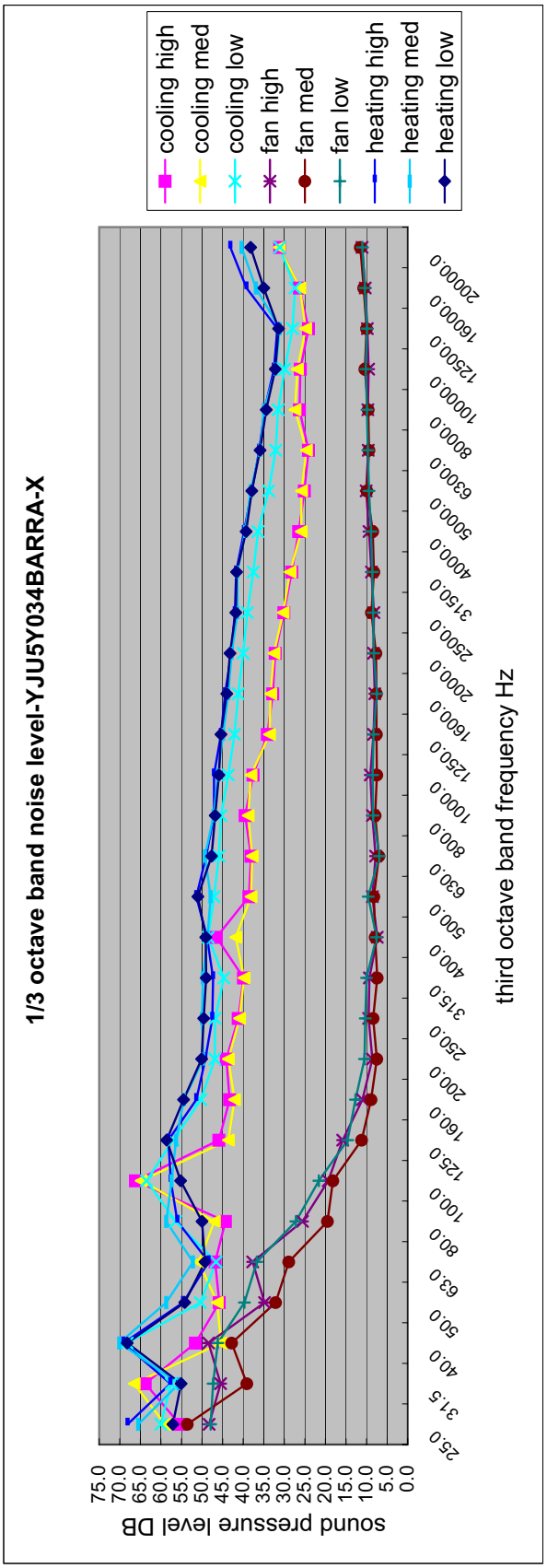
(3) Test method

1. Set the unit: 1) the unit is placed on the rubber whose thickness is 5mm; 2) if the height between the air outlet and ground is less than 1m, block the unit up to 1m.far from ground
2. Test position: After setting the unit ,the test position for the noise is 1m far from the front panel


1/3 octave band noise level-YJU3YH019BARRA-X
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low
sound pressure level DB
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz


1/3 octave band noise level-YJU4YH025BARRA-X
cooling high
heating high
Sound pressure level DB
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz


1/3 octave band noise level-YJU4YH030BARRA-X
sound pressure level DB
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low


1/3 octave band noise level-YJU5Y034BARRA-X
sound pressure level DB
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
25.0
31.5
40.0
50.0
63.0
80.0
100.0
125.0
160.0
200.0
250.0
315.0
400.0
500.0
630.0
800.0
1000.0
1250.0
1600.0
2000.0
2500.0
3150.0
4000.0
5000.0
6300.0
8000.0
10000.0
12500.0
16000.0
20000.0
third octave band frequency Hz
cooling high
cooling med
cooling low
fan high
fan med
fan low
heating high
heating med
heating low

11. Sensor characteristic

model	name	code	characteristic
YHKMXH009/012/018/024 BAR-FX	coil temp. sensor	001A3900006	R25=10KΩ±3% B25/50=3700K±3%
	ambient temp. sensor	001A3900159	R25=23KΩ±2.5% B25/50=4200K±3%
YHFMXH 012/018/024 BAR-FX	coil temp. sensor	001A3900006	R25=10KΩ±3% B25/50=3700K±3%
YHDMXH009/012/018/024 BAR-FX	ambient temp. sensor	0010451323	R25=23KΩ±2.5% B25/50=4200K±4%
YJU3YH019 BAR-A-X YJU4YH025 BAR-A-X YJU4YH030 BAR-A-X YJU5YH034 BAR-A-X	discharging temp. sensor	0010452538	R25℃=10KΩ±3% B25/50=3700K±3%
	mid-condensor temp. sensor		R25℃=10KΩ±3% B25/50=3700K±3%
	defrosting temp. sensor		R25℃=10KΩ±3% B25/50=3700K±3%
	suction temp. sensor		R80℃=50KΩ±3& B25/80=4450KΩ±3%
	outdoor ambient temp. sensor		R25℃=10KΩ±3% B25/50=3700K±3%
	gas pipe temp.sensor	0010452099	R25℃=10KΩ±3% B25/50=3700K±3%
	liquid pipe temp.sensor	0010451305	R25℃=10KΩ±3% B25/50=3700K±3%
	condenser inlet temp.sensor	0010450194	R25℃=10KΩ±3% B25/50=3700K±3%
	power module temp.sensor	0010452082	R25℃=10KΩ±3% B25/50=3700K±3%

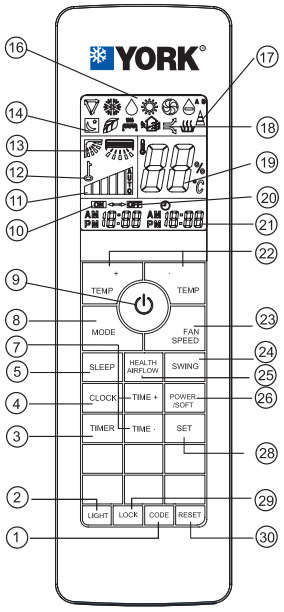
R80=50KΩ±3% B25/80=4450K±3%		R80=50KΩ±3% B25/80=4450K±3%	
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-30	11600	24	536.6
-29	10860	25	511.1
-28	10170	26	486.9
-27	9529	27	464
-26	8932	28	442.3
-25	8375	29	421.7
-24	7856	30	402.1
-23	7372	31	383.6
-22	6920	32	366
-21	6498	33	349.3
-20	6104	34	333.5
-19	5736	35	318.4
-18	5392	36	304.1
-17	5071	37	290.5
-16	4770	38	277.6
-15	4488	39	265.3
-14	4225	40	253.6
-13	3978	41	242.5
-12	3747	42	232
-11	3531	43	221.9
-10	3328	44	212.3
-9	3138	45	203.2
-8	2960	46	194.5
-7	2793	47	186.3
-6	2636	48	178.4
-5	2489	49	170.9
-4	2351	50	163.7
-3	2221	51	155.9
-2	2099	52	150.4
-1	1984	53	144.2
0	1877	54	138.3
1	1775	55	132.7
2	1680	56	127.3
3	1590	57	122.1
4	1506	58	117.2
5	1426	59	112.5
6	1351	60	108
7	1280	61	103.8
8	1214	62	99.68
9	1151		
10	1092		
11	1036		
12	983.2		
13	933.4		
14	886.4		
15	841.9		
16	800		
17	760.8		
18	722.8		
19	687.3		
20	653.8		
21	622		
22	592		
23	553.6		

R25=10KΩ±3% B25/50=3700K±3%		R25=10KΩ±3% B25/50=3700K±3%	
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-20℃	90.79	34	6.95
-19	85.72	35	6.68
-18	80.96	36	5.43
-17	76.51	37	5.6
-16	72.33	38	5.59
-15	68.41	39	5.73
-14	64.73	40	5.52
-13	61.27	41	5.32
-12	58.02	42	5.12
-11	54.97	43	4.93
-10	52.1	44	4.9
-9	49.4	45	4.58
-8	46.86	46	4.42
-7	44.46	47	4.26
-6	42.21	48	4.11
-5	40.08	49	3.97
-4	38.08	50	3.83
-3	36.19	51	3.7
-2	34.41	52	3.57
-1	32.73	53	3.45
0	31.14	54	3.33
1	29.64	55	3.22
2	28.22	56	3.11
3	26.4	57	3.11
4	25.61	58	2.9
5	24.41	59	2.81
6	23.27	60	2.72
7	22.2	61	2.63
8	21.18	62	2.54
9	20.21	63	2.49
10	19.3	64	2.38
11	18.43	65	2.3
12	17.61	66	2.23
13	16.83	67	2.16
14	16.09	68	2.09
15	15.38	69	2.03
16	14.71	70	1.96
17	14.08	71	1.9
18	13.48	72	1.85
19	12.9	73	1.79
20	12.36	74	1.73
21	11.84	75	1.68
22	11.34	76	1.63
23	10.87	77	1.58
24	10.43	78	1.54
25	10	79	1.49
26	9.59	80	1.45
27	9.21		
28	8.84		
29	8.48		
30	8.15		
31	7.83		
32	7.52		
33	7.23		

R25=23KΩ±2.5% B25/50=4200K±3%		R25=23KΩ±2.5% B25/50=4200K±3%	
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-20℃	281.34	22℃	26.54
-19℃	263.56	23℃	25.3
-18℃	247.04	24℃	24.12
-17℃	231.66	25℃	23
-16℃	217.35	26℃	21.94
-15℃	204.02	27℃	20.94
-14℃	191.61	28℃	19.99
-13℃	180.04	29℃	19.09
-12℃	169.24	30℃	18.23
-11℃	159.17	31℃	17.42
-10℃	149.77	32℃	16.65
-9℃	140.99	33℃	15.92
-8℃	132.78	34℃	15.22
-7℃	125.11	35℃	14.56
-6℃	117.93	36℃	13.93
-5℃	111.22	37℃	13.34
-4℃	104.93	38℃	12.77
-3℃	99.04	39℃	12.23
-2℃	93.52	40℃	11.71
-1℃	88.35	41℃	11.22
0℃	83.5	42℃	10.76
1℃	78.94	43℃	10.31
2℃	74.67	44℃	9.89
3℃	70.65	45℃	9.49
4℃	66.88	46℃	9.1
5℃	63.33	47℃	8.74
6℃	60	48℃	8.39
7℃	56.86	49℃	8.05
8℃	53.91	50℃	7.73
9℃	51.13	51℃	7.43
10℃	48.51	52℃	7.14
11℃	46.04	53℃	6.86
12℃	43.72	54℃	6.6
13℃	41.52	55℃	6.34
14℃	39.45	56℃	6.1
15℃	37.5	57℃	5.87
16℃	35.66	58℃	5.65
17℃	33.92	59℃	5.44
18℃	32.27	60℃	5.24
19℃	30.72		
20℃	29.25		
21℃	27.86		

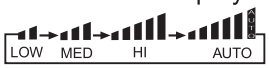
12. Controller functions

Remote controller



1.CODE
Used to select CODE A or B which will be displayed on LCD.Please select A without special explanation.
2.LIGHT button
Control the lightening and extinguishing of the indoor LED display board.
3. TIMER button
4. CLOCK button
5. SLEEP button
7. TIME button

8. MODE button
9. ON/OFF button
10.TIMER ON displa y
11. FAN SPEED displa y



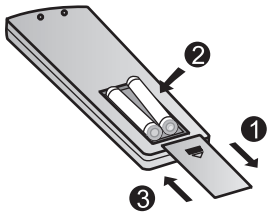
12. LOCK display
13. SWING display
14. SLEEP display
16. Operation mode display

Operation mode	AUTO	COOL	DRY	FAN	HEAT
Remote controller					

17.Signal sending display
18. POWER/SOFT display
19. TEMP display
20. TIMER OFF display
21. CLOCK display
22. TEMP button
23. FAN SPEED button
24.SWING button
25. HEALTH AIRFLOW button
26. POWER/SOFT button
28. SET button
29. LOCK button
If pressed, the other buttons will be disabled.Press it once again,lock will be cancelled.
30. RESET button
When the remote controller appears abnormal,use a sharp pointed article to press this button to reset the remote controller normal.

NOTE:
Cooling only unit do not have displays and functions related with heating
If the unit which you purchased has healthy function,follow it.If not,please ignore.
POWER/SOFT button is not available for 07k、09k、12k.

Loading of the battery



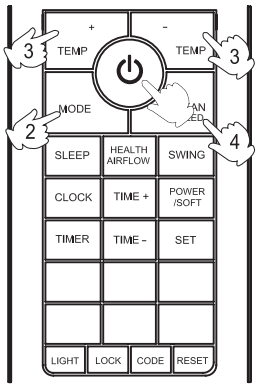
1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key(cylinder);
3 Be sure that the loading is in line with the " + "/"-";
4 Load the battery,then put on the cover again.

Note:
The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
When electronic-started type fluorescent lamp or change-over wireless telephone is installed in the type fluorescent lamp or room, the receiver is apt to be disturbed in receivingthe signals, so the distance to the indoor unit should be shorter.
Full display or unclear display during operation indicates the batteries have been used up.Please change batteries.
If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

Hint:
Remove the batteries in case unit won't be in usage for a long period.
If there are any display after taking-out, just need to press reset key

Base Operation

Remote controller

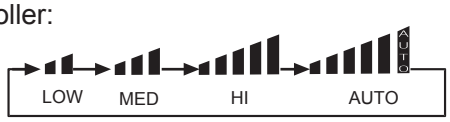


1. Unit start
Press ON/OFF on the remote controller, unit starts.

2.Select operation mode
Press MODE button. For each press, operation mode changes as follows:
Remote controller:

3.Select temp.setting
Press TEMP+ / TEMP- button
TEMP+ Every time the button is pressed, temp.setting increase 1℃,if kept depressed, it will increase rapidly
TEMP- Every time the button is pressed, temp.setting decrease 1℃,if kept depressed, it will decrease rapidly
Select a desired temperature.

4.Fan speed selection
Press FAN SPEED button. For each press, fan speed changes as follows:
Remote controller:



Air conditioner is running under displayed fan speed.
When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

Operation Mode	Remote Controller	Display Board	Note
AUTO			Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed
COOL			according to room temperature.
DRY			In DRY mode, when room temperature becomes lower than temp.setting+2°C,unit will run intermittently at LOW speed regardless of FAN setting.
FAN			In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode ,AUTO is not available in FAN mode.And temp.setting is disabled. In FAN mode,SLEEP operation is not available.
HEAT			

Sleep Operation

Before going to bed,you can simply press the SLEEP button and unit will operate in SLEEP mode and bring you a sound sleep.

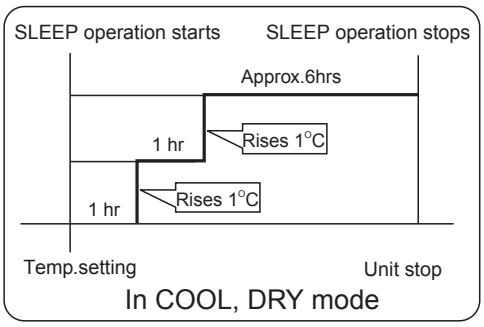
Use of SLEEP function

After the unit starts,set the operation status, then press SLEEP button before which the clock must be adjusted and time being set.

Operation Mode

1. In COOL,DRY mode

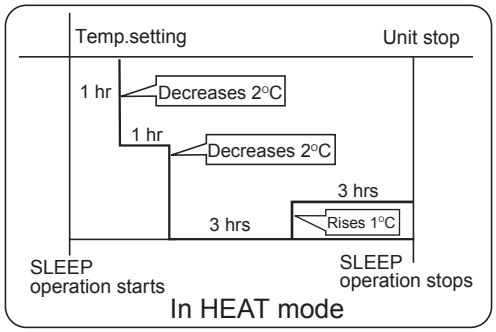
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours, temp.rises by 1°C futher.The unit will run for further 6 hours then stops Temp. is higher than temp. setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2. In HEAT mode

1 hours after SLEEP mode starts,temp will become 2°C lower than temp.setting.After another 1 hours,temp decrease by 2°C futher.After more another 3hours,temp.rises by 1°C futher.The unit will run for further 3 hours then stops.Temp.is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3. In AUTO mode

The unit operaters in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5.Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowing the wind speed after sleeping.
If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled;the machine will be in the state of timing-on.

POWER/SOFT Operation

(1) POWER Operation

When you need rapid heating or cooling, you can use this function. In COOL mode, fan speed automatically takes high speed of AUTO fan mode. In HEAT mode, fan speed automatically takes medial speed of AUTO fan mode.

(2) SOFT Operation

You can use this function when silence is needed for rest or reading. In SOFT operation mode, fan speed automatically takes low speed of AUTO fan mode.

Note：

During POWER operation, in rapid HEAT or COOL mode ,
distribution. Long period SOFT operation will cause effect of not too cool or not too warm.

To cancel POWER or SOFT operation
Press POWER/SOFT button again ,POWER or SOFT disappears.

NOTE:

Cooling only unit do not have displays and functions related with heating.

Timer On/Off On-Off Operation

Set clock correctly before starting TIMER operation.
1.After unit starts, select your desired operation mode.
2.Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:
Remote controller:

Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). " ON "or " OFF "will flash.
3.Press TIME+ /TIME- button to set time.
It can be adjusted within 24 hours.
4.After setting correct time, press SET button to confirm " ON "or" OFF " on the remote controller stops flashing.
5.Cancel TIMER mode
Just press TIMER button several times until TIMER mode disappears.
Hints:
After replacing batteries or a power failure happens, time setting should be reset.
Remote controller possesses memory function,when use TIMER mode next time, just press SET button after mode selecting if time setting is the same as previous one.
According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

Healthy airflow Operation

1.Press ON/OFF to starting
Setting the comfort work conditions.
2.The setting of healthy airflow function
1).Press the button of healthy airflow， appears on the display. Horizontal airflow sending. Avoid the airflow blows direct to the body.
2).Press the button of healthy airflow again, appears on the display. Downward airflow sending. Avoid the airflow blows direct to the body.
3.The cancel of the healthy airflow function
Press the button of healthy airflow again, the unit goes on working under the condition before the setting of healthy airflow function.
Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.
Note:
1.After setting the healthy airflow function, the position grill is fixed.
2.In heating, it is better to select the mode.
3.In cooling, it is better to select the mode.
4.In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille .

Wired controller

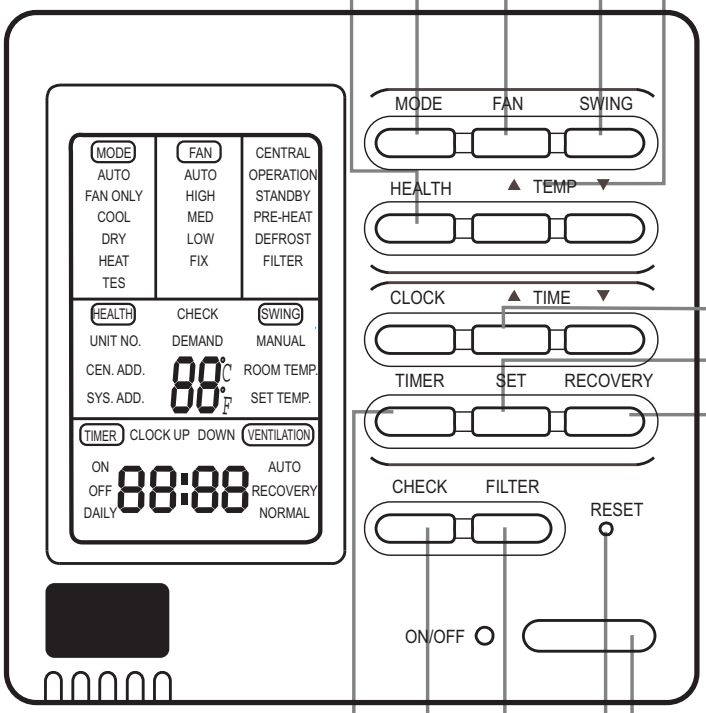
Mode switch
Choose running mode

Health switch
Used to control oxygen function and negative ion

Timing switch
It is used for choosing timing running

Self-inspection switch
It is used for inspection service

Filter reset
After cleaning air inlet and filter, press this switch. The unit begins to run



Fan speed switch
Change wind speed

Swing switch
Open and close air flap

TEMP switch
Used for changing set temperature

Time switch
It is used to regulate setting time.

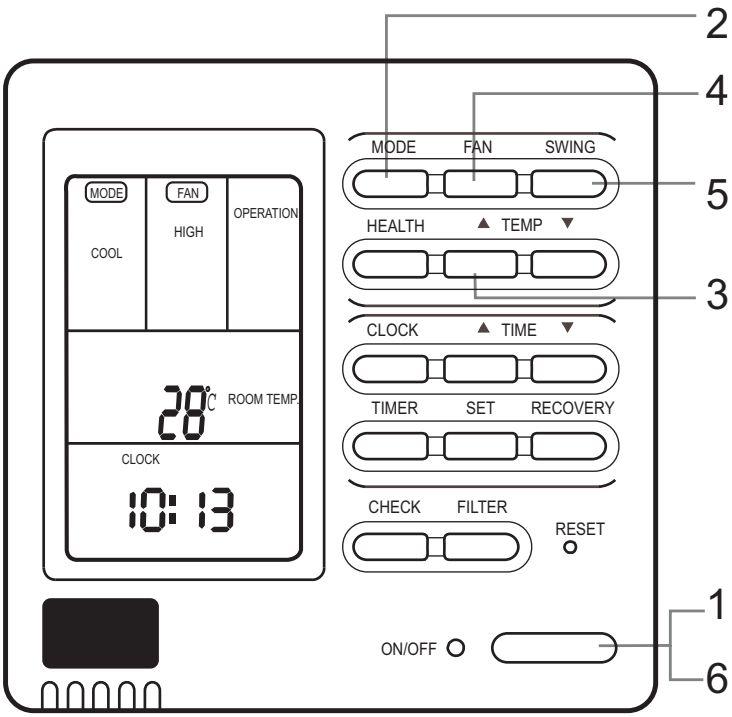
Clock, timing and address setting

Air change switch
It is used to open and close air change function. The mode is as follows:
No display-air change (automatic)-air change (RECOVERY)-air change (NORMAL)

ON/OFF switch
Do on and off function. The unit is on when pressing it; and is off when pressing it again (needn't to open front cover)

Reset key
When in abnormal state, push the reset key with a spike, which may return the unit to normal

ON/OFF operation



Press ON/OFF switch on line controller directly

The line controller displays the running state in the latest time (timing and swing state may not be displayed).

1. Press "ON/OFF" switch.

The air conditioner starts operating, and the light on the wired controller is on.

2.Choose operation mode.

Press "mode"switch to change to "AUTO"---"FAN ONLY"---"COOL"---"DRY"---"HEAT".

3.Press "TEMP" switch

Change set temperature:press TEMP▲or TEMP▼every time, [SET] will display,and set temperature will increase/reduce 1℃

4.Press "FAN SPEED" switch

FAN ONLY Operation:

Press "FAN SPEED" switch to change to "HIGH"--"MED"--"LOW"--"HIGH"

In AUTO,COOL,DRY,HEAT Operation:

Press "FAN SPEED" switch to change to "AUTO"--"HIGH"--"MED"--"LOW"--"AUTO"

5.Press "swing" switch on the line controller to swing the wind screen.

6.Press "ON/OFF"switch, off.

The light on the line controller is off.

Note

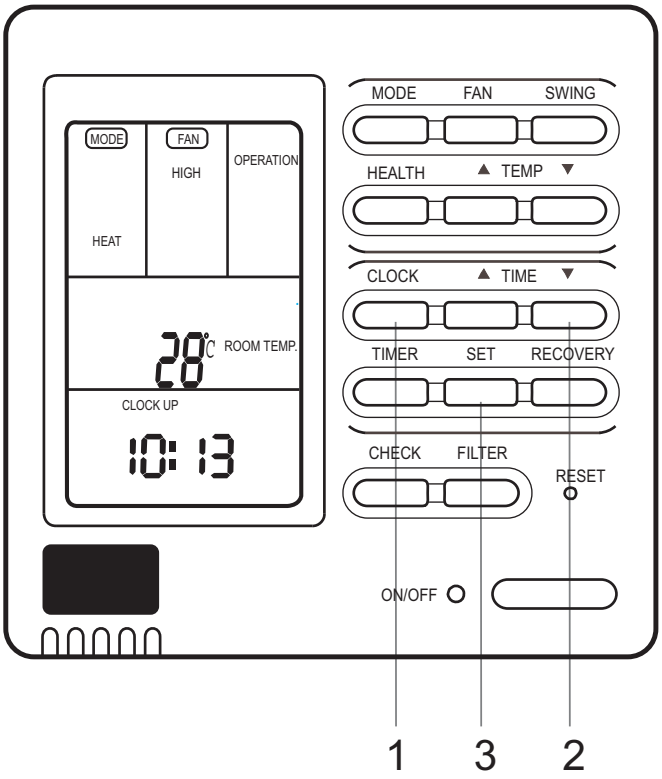
Several seconds after the operation of the line controller, the setting of the unit will change.

Remarks

- Avoid pressing "ON/OFF" switch frequently.
- Do not press line controller or switches by sharp objects.
- The temperature is on the basis of the setting value. The wind temperature may not reach the setting value because of the outer air conditioner and system protection.
- When the wired controller is power on, the screen fully displays it for two seconds. and clock zone "8888"-"888"-"88"-"8" flicker for 30 seconds. All the switches are invalid at the time.

Present time setting

- The timing is based on the real time. Thus, the real time should be regulated in advance.
- The clock regulation steps are as follows:



1.Press "CLOCK" switch

"CLOCK" flickers, and the time displayed is the real time.

2.Press "▲" and "▼" to regulate the time.

The time increases a minute each time you press "▲" switch.
The time decreases a minute each time you press "▼" switch.

3.Press "setting" switch. The setting is achieved.

Notes

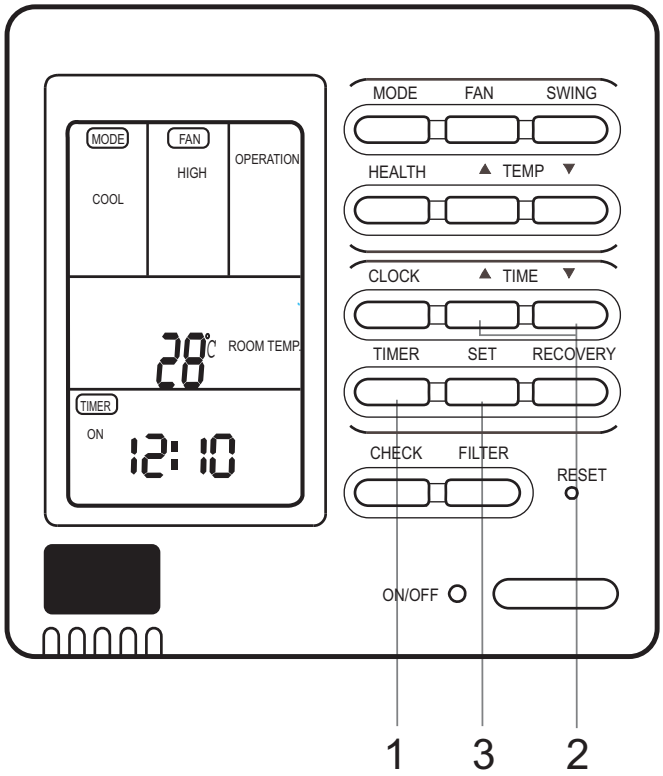
- If not in timing, the screen displays the real time.
- If in timing, the screen displays the timing time.
- If you want to know the real time, go to the first step.

Setting of power failure compensation function

When SW1-6 on PCB of wire controller is OFF, it will be in power failure compensation. If the SW1-6 is ON, it has no compensation function.
When the power is on after blackout, the unit will return to the former state if compensation function is set. Otherwise, it will stop. When restarting the unit, press "ON/OFF" switch on wired controller.

Timing setting

- OFF timing: when a set time has elapsed, the unit stops running.
- ON timing: when a set time has elapsed, the unit starts.



Press "ON/OFF"switch firstly, and set up operation mode. Please regulate the clock in advance before using the timing function.

1.Press "TIME" switch.

The display changes with the following sequence:

ON → OFF → on OFF → on OFF → CYCLE → no display

2.Set up "TIMER"

When timing ON or timing OFF flickers, press "▲" or "▼" to regulate the time

Press" ▲ "or " ▼ "set up ON/OFF time.

The setting time increases ten minutes each time you press "▲" switch.

The setting time decreases ten minutes each time you press "▼" switch.

When setting timing ON and timing OFF at the same time, press "timing" switch to change the setting item.

3.Time setting is achieved. Press"setting"switch.

Cancel timing

If you want to change the timing mode to normal operation, press "timing" until there is no timing display. When the timing is invalid, the mode is in normal operation.

parts of wired controller explanation :

1.The unit starts or stops at the setting time. Meanwhile, it displays the timing time.

2."ON Timing, OFF timing and circulation"means that the unit is on and off at the setting time everyday.

Notes

- The shorter setting time will be carried out firstly.
- If the ON timing and OFF timing are the same, the setting is invalid.
- Even in timing condition, you may start or close the unit through pressing "ON/OFF" switch.

Query indoor malfunction history:

In the state of power on or power off, press [CHECK] button, enter the malfunction-querying mode of all indoor units in the group. Then [CHECK] and [UNIT NO.] will display, and the actual indoor numbers will be displayed in some sequence (unit number is in decimals). At the same time, in the time region, there will be the current malfunction and the latest time malfunction, the displaying format is [XX:YY], in which XX stands for the current malfunction, if normal, it will display "--"; YY stands for the latest time malfunction. The failure code of every unit will display for 3 seconds. After the failure codes of all indoor units in the whole group are displayed, the mode will quit automatically.

How to change the function switches?

No.	Type	State of switch	Function description
SW1-1	Select the master or the slave controller	ON	set as the slave controller
		OFF	set as the master controller
SW1-2	Select the controller mode	ON	standard controller
		OFF	air handler controller
SW1-3	Room temperature display option	ON	visible room temperature
		OFF	invisible room temperature
SW1-4	26° lock	ON	Unavailable 26° lock
		OFF	available 26° lock
SW1-5	Temperature sensor position option	ON	Sensor of the controller
		OFF	Sensor in the unit
SW1-6	Auto restart	ON	unavailable
		OFF	available
SW1-7	Factory Seting	ON	default setting
SW1-8	Factory Setting	OFF	default setting

Notes

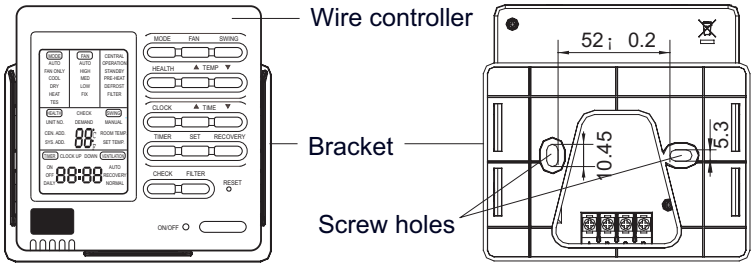
1. Switches or jumper wire must be adjusted when the wire controller is powered off. If the wire controller is powered on, the above operations will be invalid.

2. Function difference between master wire controller and slave one:

Contrastive items	Master wire controller	Slave wire controller
Function	All of functions	Only with below functions: ON/OFF, MODE, FAN SPEED, SET TEMP., SWING

Installation Manual For Wire Controller

1. Take down wire controller from the holder



2. Install the controller holder

According to the position of 2 screw holes on the holder, drill 2 holes on the wall, and strike the wood stopper to the holes respectively.

Then align the 2 screw holes of wired controller holder to the wood stopper, fix the holder on the wall with wood screw.

Note: Try a wall as flat as possible for installation. Don't use excessive force to tighten screws, otherwise, the holder will be damaged.

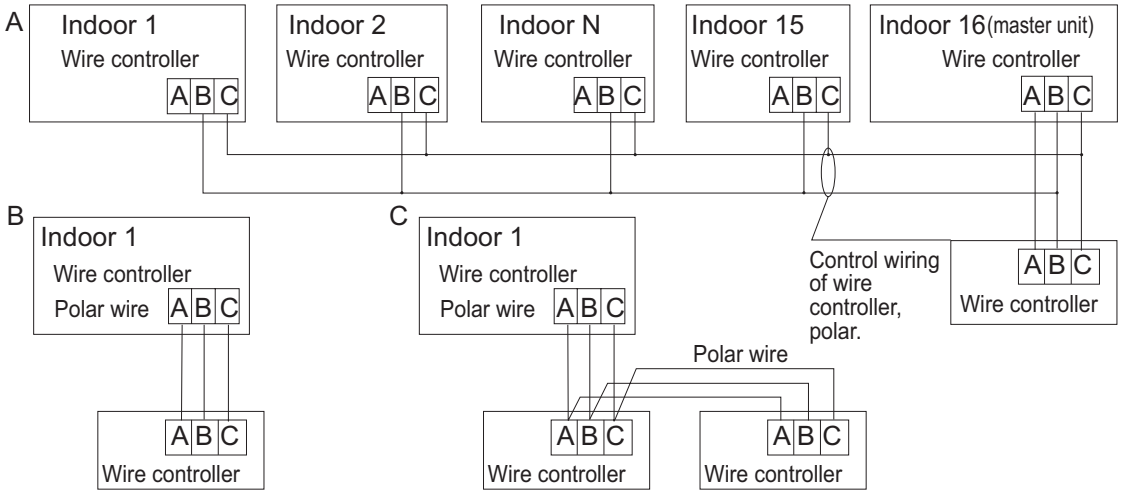
3.Wiring instruction

Use shielded wire between indoor and wire controller.And be earthed on one side, or the unit will not work normally because of interference.

Note: Confirm the terminal connection firmly, and do not get in tough with shielded wire.

4.Place wire controller on the holder, and pay attention not to pressing any wires.

5. Wiring connections of wire controller:



There are three methods to connection wire controller and the indoor units:

A.One wired controller can control max. up to 16 sets of indoor units, and 3 pieces of polar wire must connect the wire controller and the master unit (the indoor unit connected with wire controller directly), the others connect with the master unit through 2 pieces of polar wire.

B. One wire controller controls one indoor unit, and the indoor unit connects with the wire controller through 3 pieces of polar wire.

C. Two wired controllers control one indoor unit. The wire controller connected with indoor unit is called master one, the other is called slave one. Master wire controller and indoor unit; master and slave wire controllers are all connected through 3 pieces of polar wire.

6. Communication wiring:

The wire controller is equipped with special communication wiring in the accessories. 3-core terminal (1-white 2-yellow 3-red) is connected with the terminal A, B, C of wire controller respectively.

The communication wiring is 5 meter long; if the actual length is more than it, please distribute wiring according to below table:

Communication wiring length(m)	Dimensions of wiring
< 100	0.3mm^{2}x3-core shielded wire
⩾100 and <200	0.5mm^{2}x3-core shielded wire
⩾200 and <300	0.75mm^{2}x3-core shielded wire
⩾300 and <400	1.25mm^{2}x3-core shielded wire
⩾400 and <600	2mm^{2}x3-core shielded wire

*One side of the shielded sheet of communication wire must be earthed.